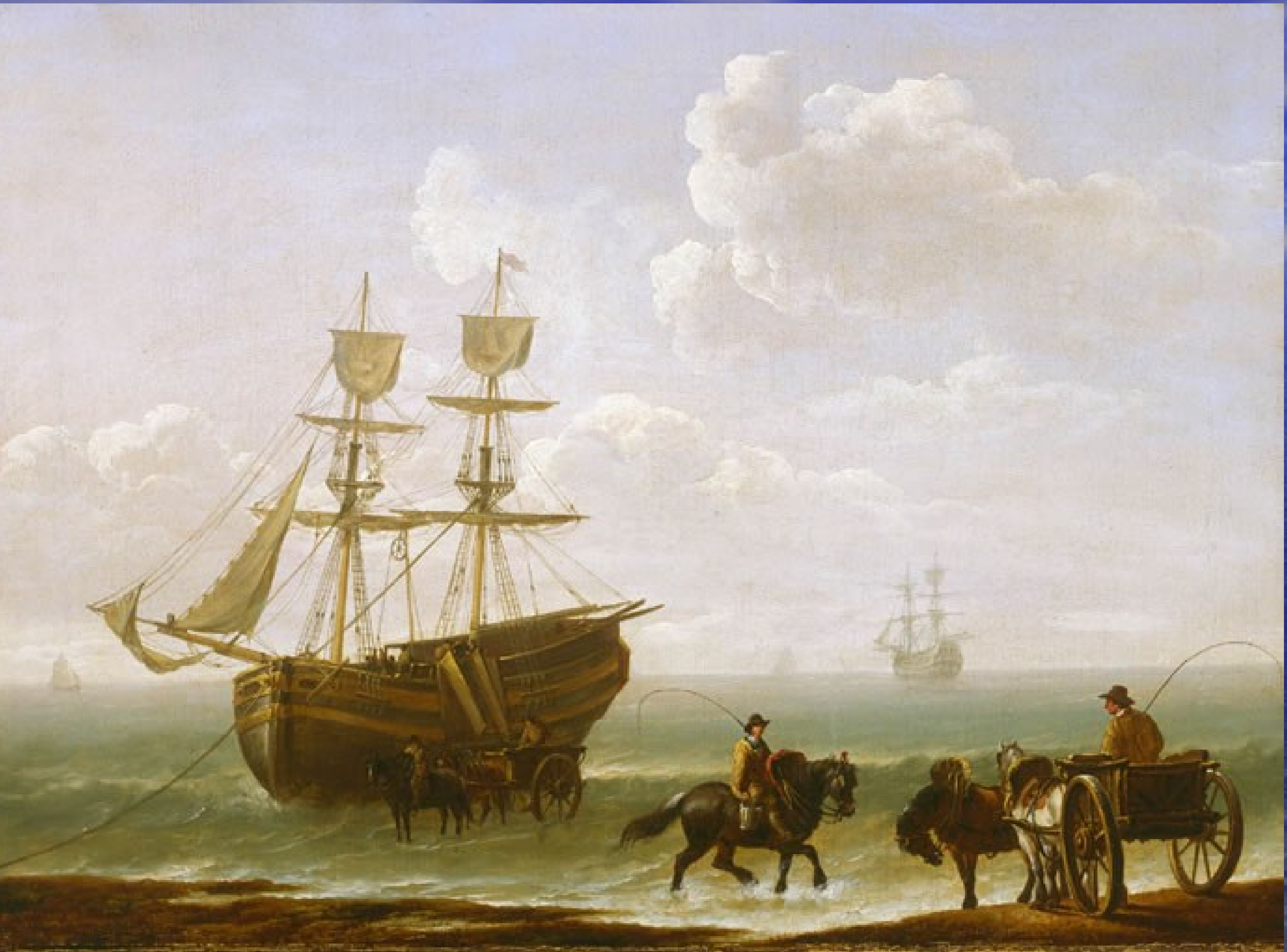
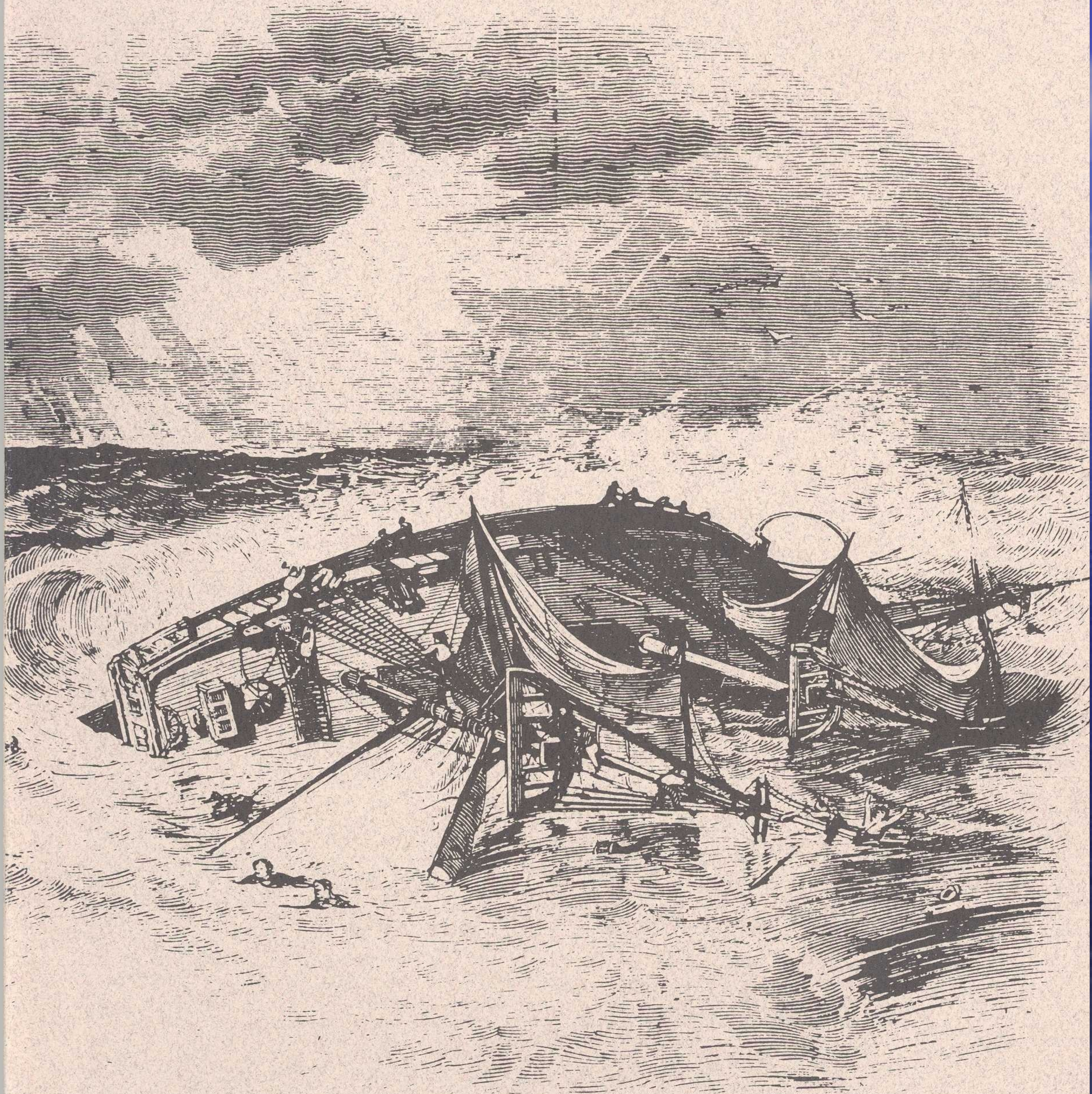
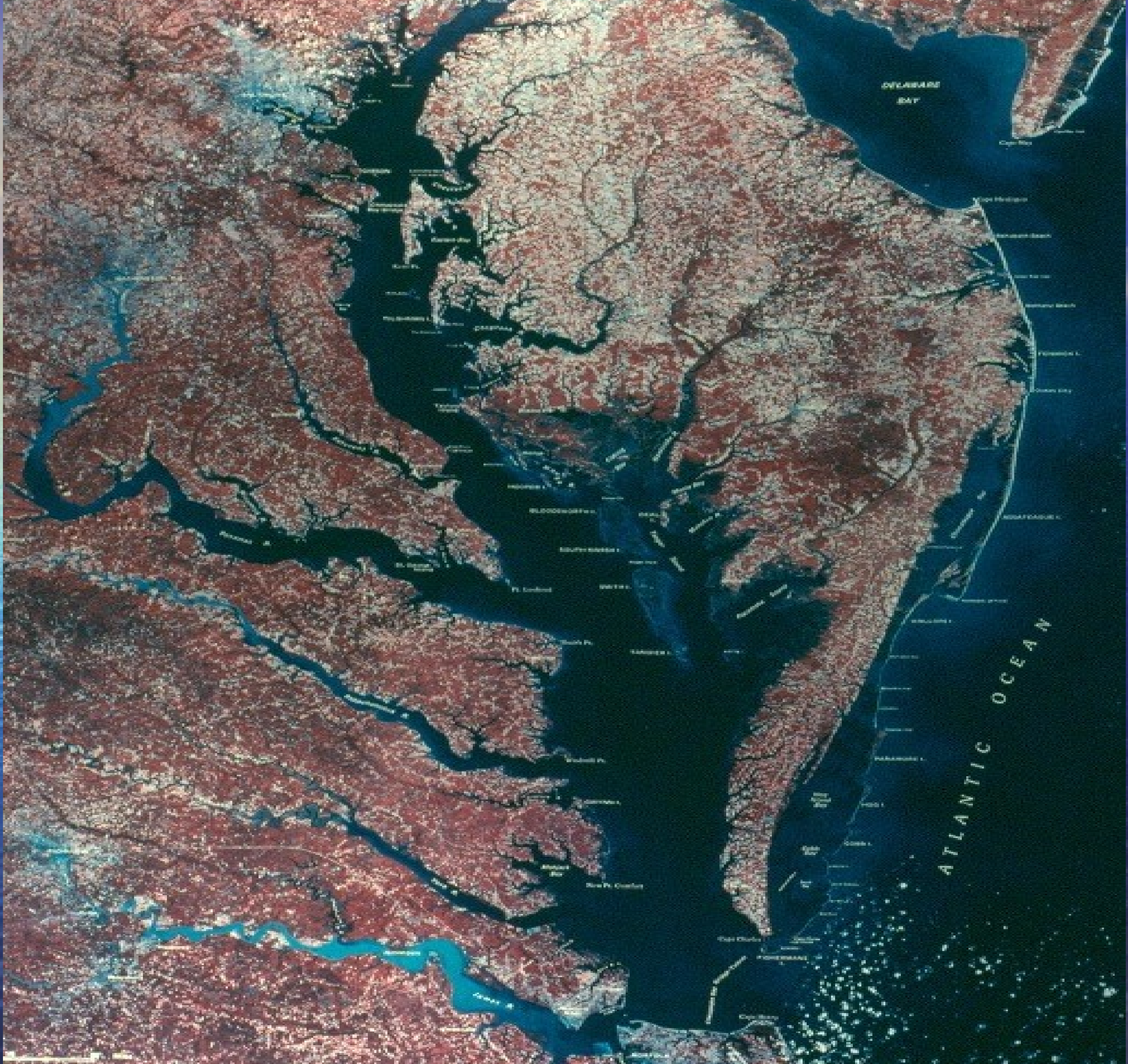
The Roosevelt Inlet Shipwreck

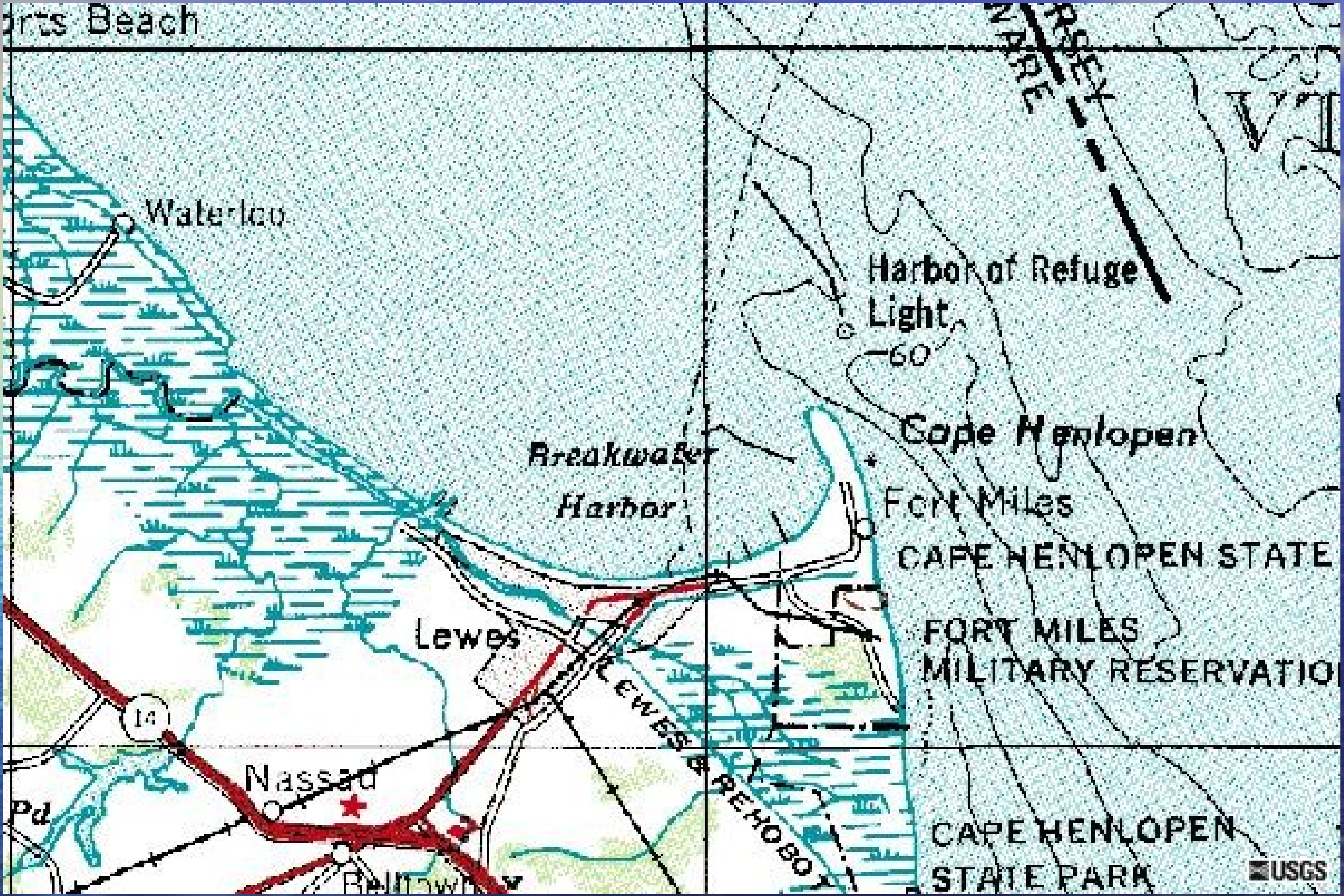
Lewes, Delaware
Beach Nourishment Project

R. A. Dunn
USAED, Philadelphia

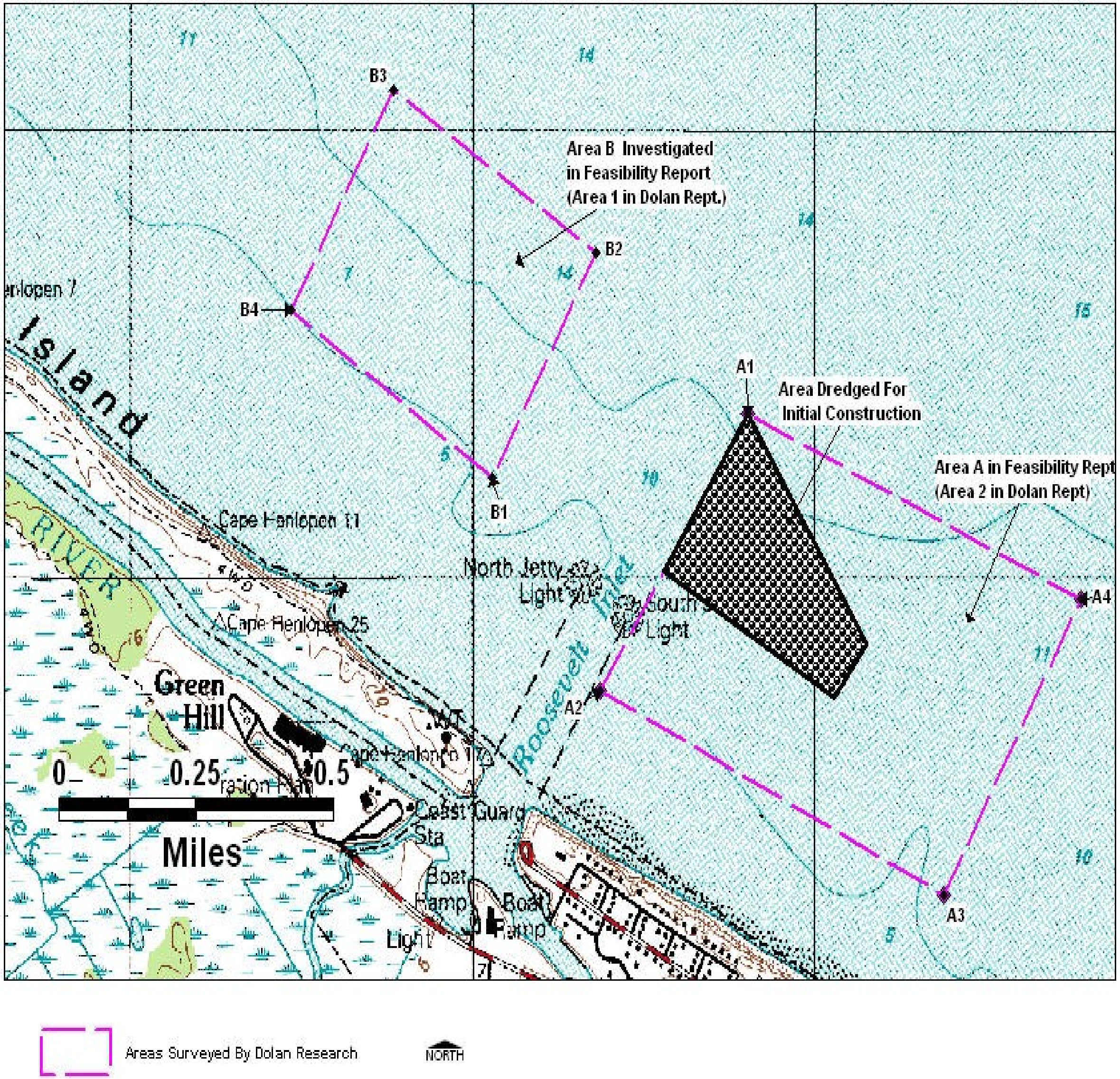


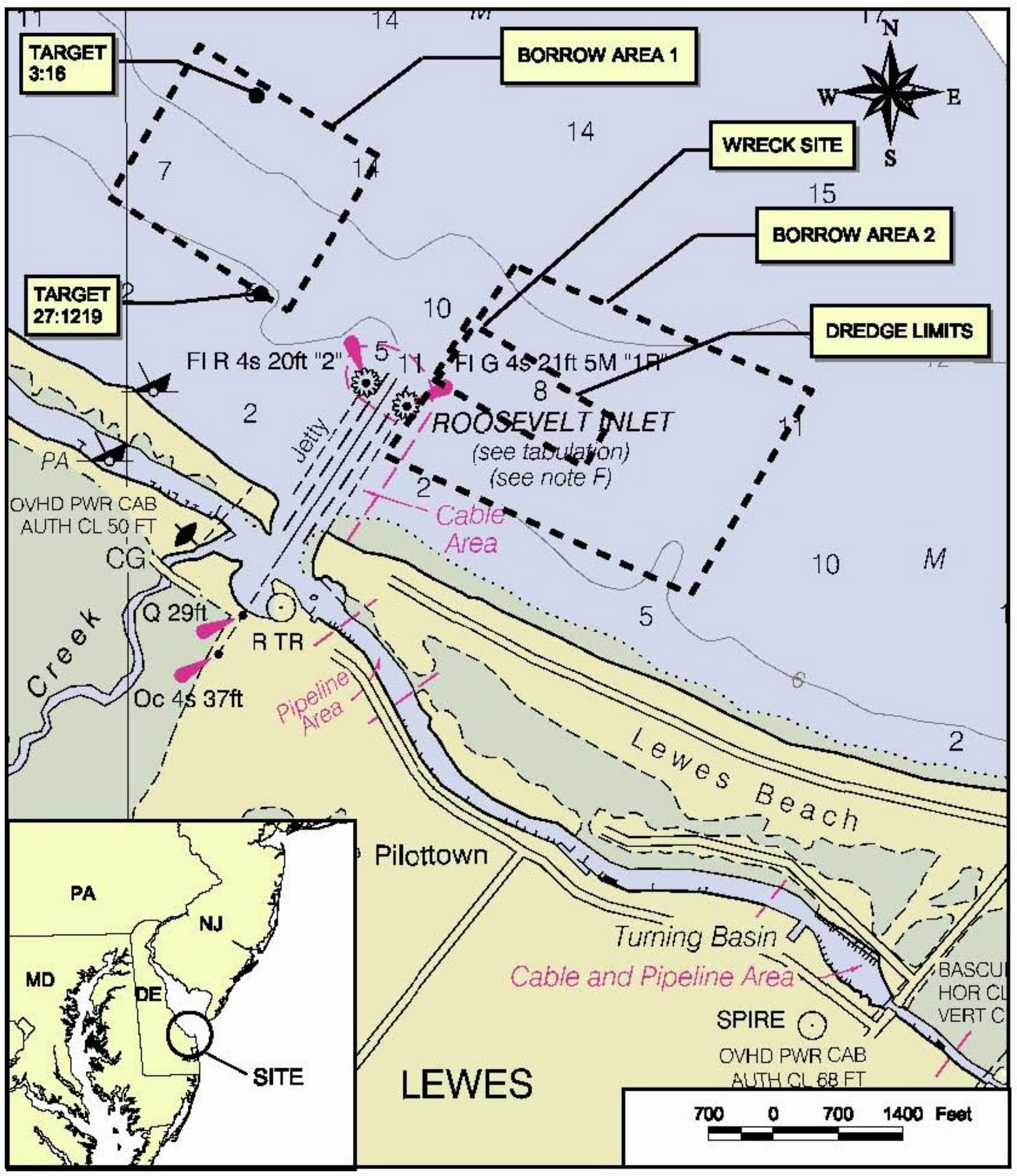


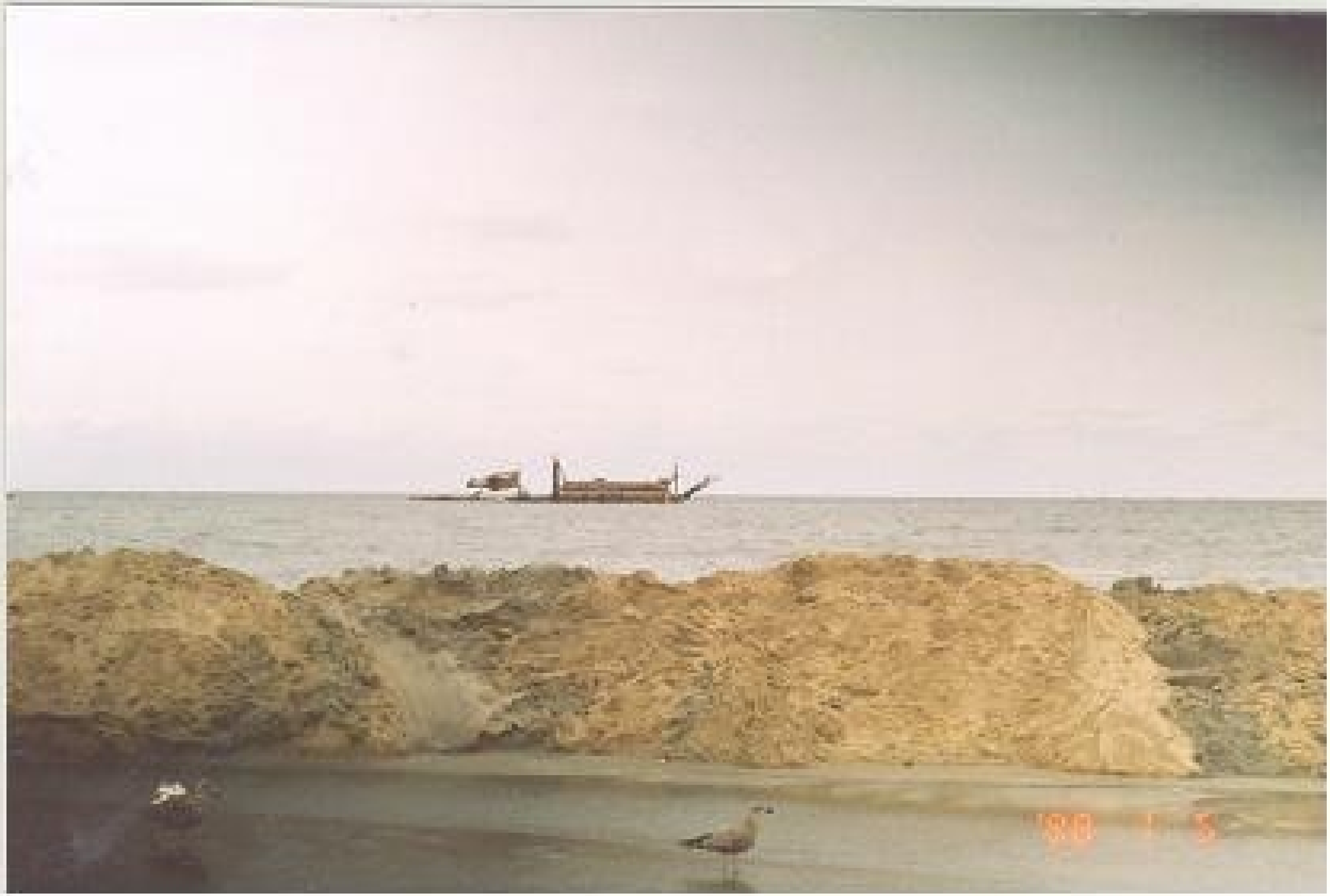

DELAWARE BAY
ATLANTIC OCEAN


orts Beach
Waterloo
RSEY
ARE
VI
Harbor of Refuge
Light
60
Cape Henlopen
Breakwater
Harbor
Fort Miles
CAPE HENLOPEN STATE
Lewes
FORT MILES
MILITARY RESERVATIO
14
LEWES & REHOBO
Nassau
Pd
Belltown
CAPE HENLOPEN
STATE PARK
USGS

Lewes Beach Borrow Areas


B3
Area B Investigated in Feasibility Report (Area 1 in Dolan Rept.)
B2
B4
B1
A1
Area Dredged For Initial Construction
Area A in Feasibility Rept (Area 2 in Dolan Rept)
A4
A2
A3
Island
RIVER
Cape Henlopen 11
Cape Henlopen 25
North Jetty Light
South Light
Roosevelt Inlet
Green Hill
Coast Guard Sta
Boat Ramp
Boat Ramp
Light
0
0.25
0.5
Miles
Areas Surveyed By Dolan Research
NORTH


TARGET 3:16
BORROW AREA 1
WRECK SITE
BORROW AREA 2
DREDGE LIMITS
TARGET 27:1219
N
W
E
S
Fl R 4s 20ft "2"
Fl G 4s 21ft 5M "1R"
ROOSEVELT INLET
(see tabulation)
(see note F)
Jetty
PA
OVHD PWR CAB
AUTH CL 50 FT
CG
Cable Area
Q 29ft
R TR
Oc 4s 37ft
Creek
Pipeline Area
Lewes Beach
Pilottown
Turning Basin
Cable and Pipeline Area
SPIRE
OVHD PWR CAB
AUTH CL 68 FT
BASCU
HOR CL
VERT C
LEWES
700
0
700
1400
Feet
PA
NJ
MD
DE
SITE
14
14
14
7
10
15
11
8
11
2
2
5
11
10
M
5
6
2
M



Dredge in operation off Lewes Beach.
(Courtesy, JuneRose Futcher).

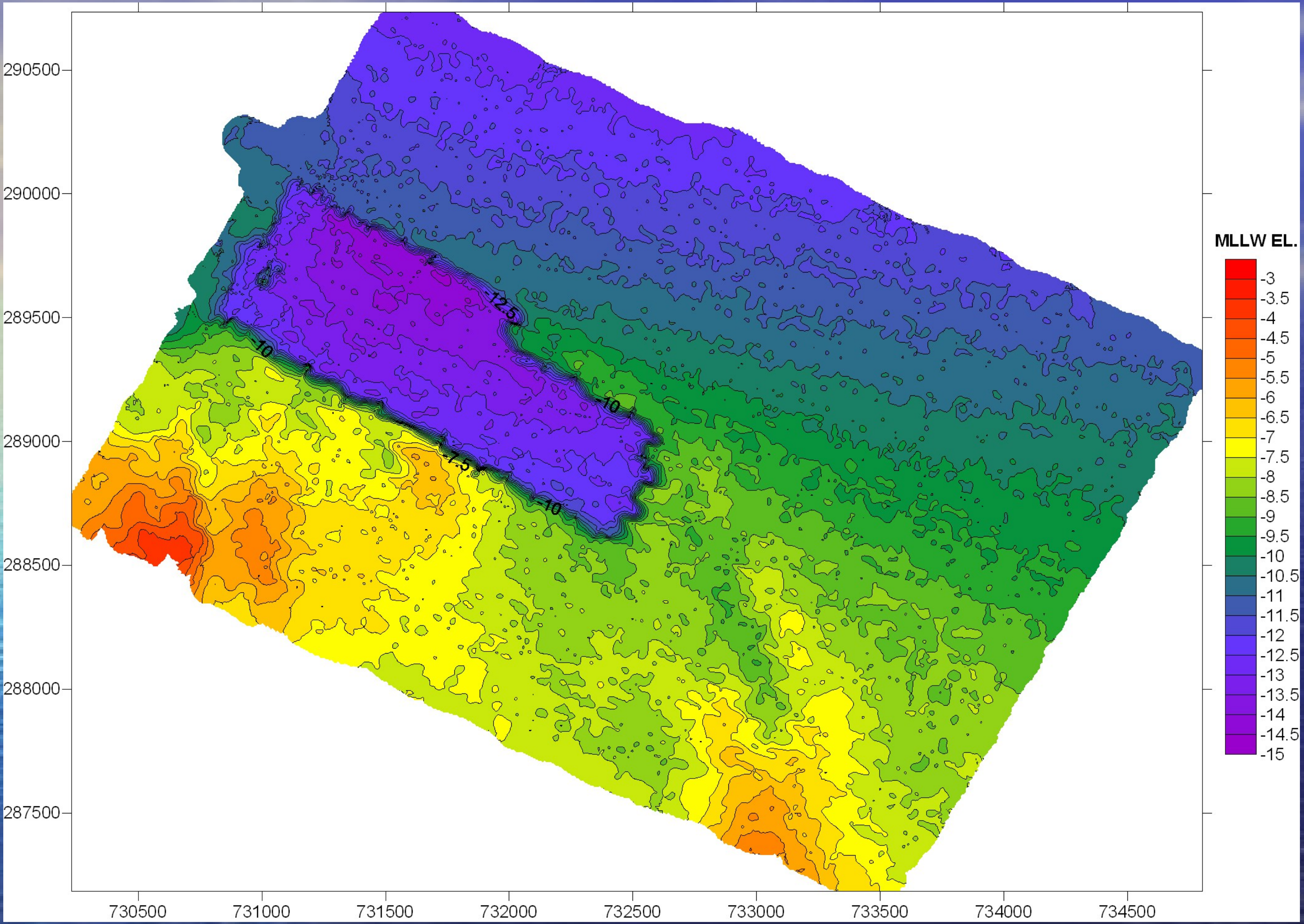
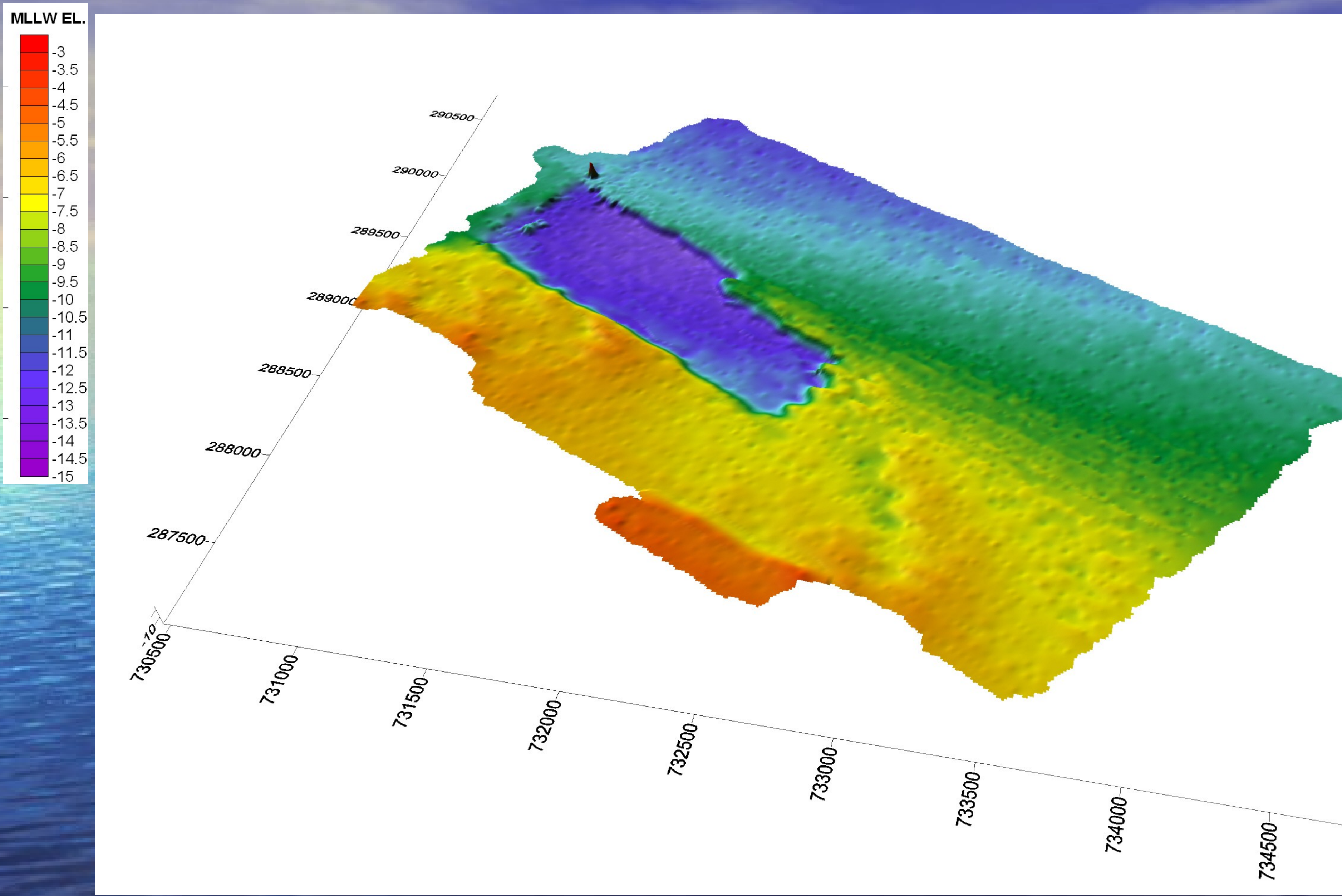

290500
290000
289500
289000
288500
288000
287500
730500
731000
731500
732000
732500
733000
733500
734000
734500
-12.5
-10
-10
-7.5
-10
-10
MLLW EL.
-3
-3.5
-4
-4.5
-5
-5.5
-6
-6.5
-7
-7.5
-8
-8.5
-9
-9.5
-10
-10.5
-11
-11.5
-12
-12.5
-13
-13.5
-14
-14.5
-15

Figure 4. Bathymetric Contour Map (Notes: 1. Contour Intervals = .5 feet & 2. Dredged Area = dark blue & purple)


MLLW EL.
-3
-3.5
-4
-4.5
-5
-5.5
-6
-6.5
-7
-7.5
-8
-8.5
-9
-9.5
-10
-10.5
-11
-11.5
-12
-12.5
-13
-13.5
-14
-14.5
-15
290500
290000
289500
289000
288500
288000
287500
-10
730500
731000
731500
732000
732500
733000
733500
734000
734500

Cape Gazette

December 10, 2004

Dredging up some history in Lewes

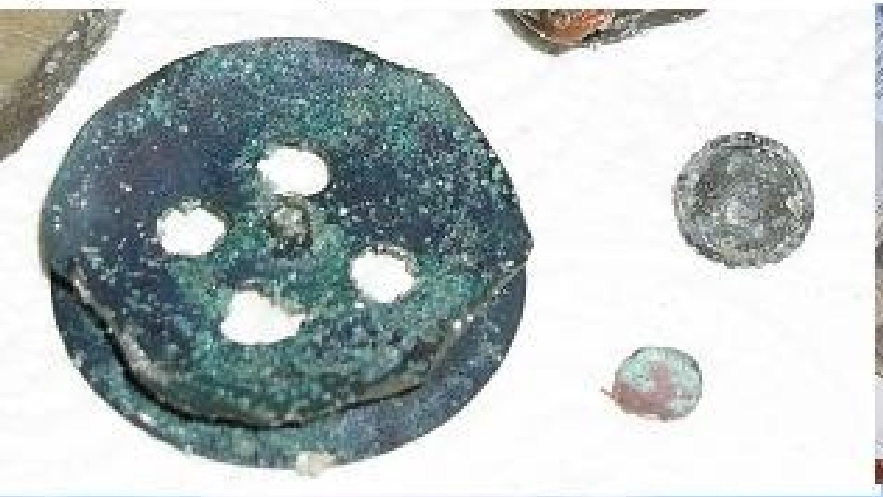
By Henry J. Evans Jr.

Bits and pieces of Lewes' past in the form of pottery shards, bottle fragments, bricks and part of a clay pipe have been found along Lewes Beach near the Roosevelt Inlet.

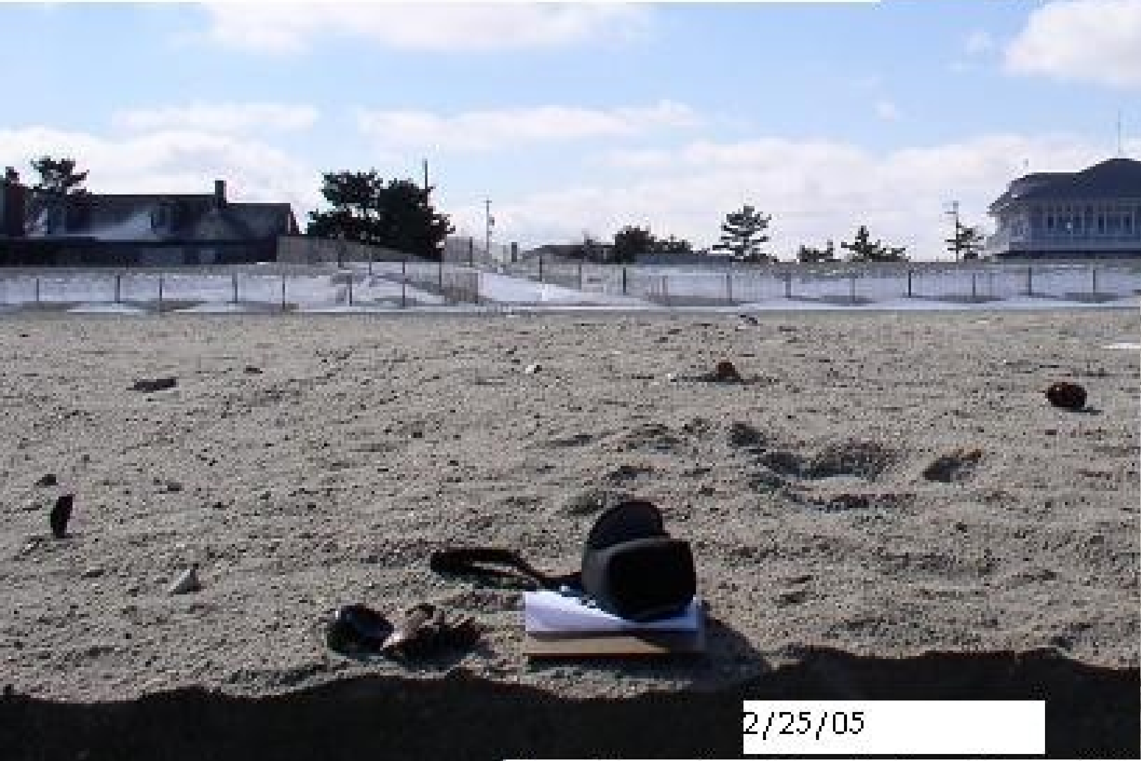
Experts say the artifacts were contained in sand dredged from the inlet in September by a U.S. Army Corps of Engineers beach fill project and might indicate the location of an early Dutch settlement.

"It's very exciting," said State of Delaware archaeologist Craig Lukezic after he and Robert Dunn, an archaeologist with the U.S. Army Corps of Engineers Philadelphia District, had just finished collecting materials from the beach Dec. 8.

2/23/05: Metal wheel, button & cap

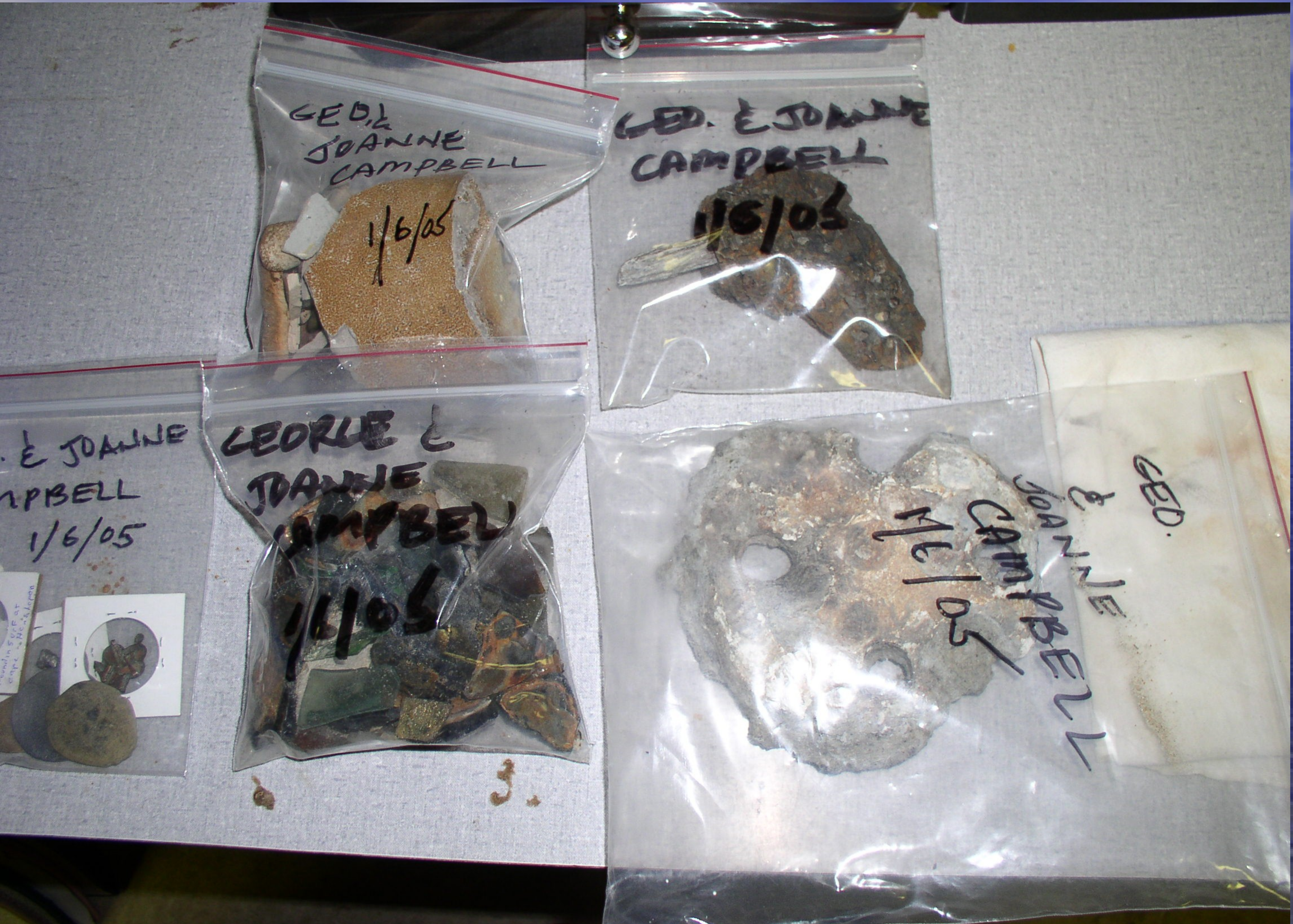


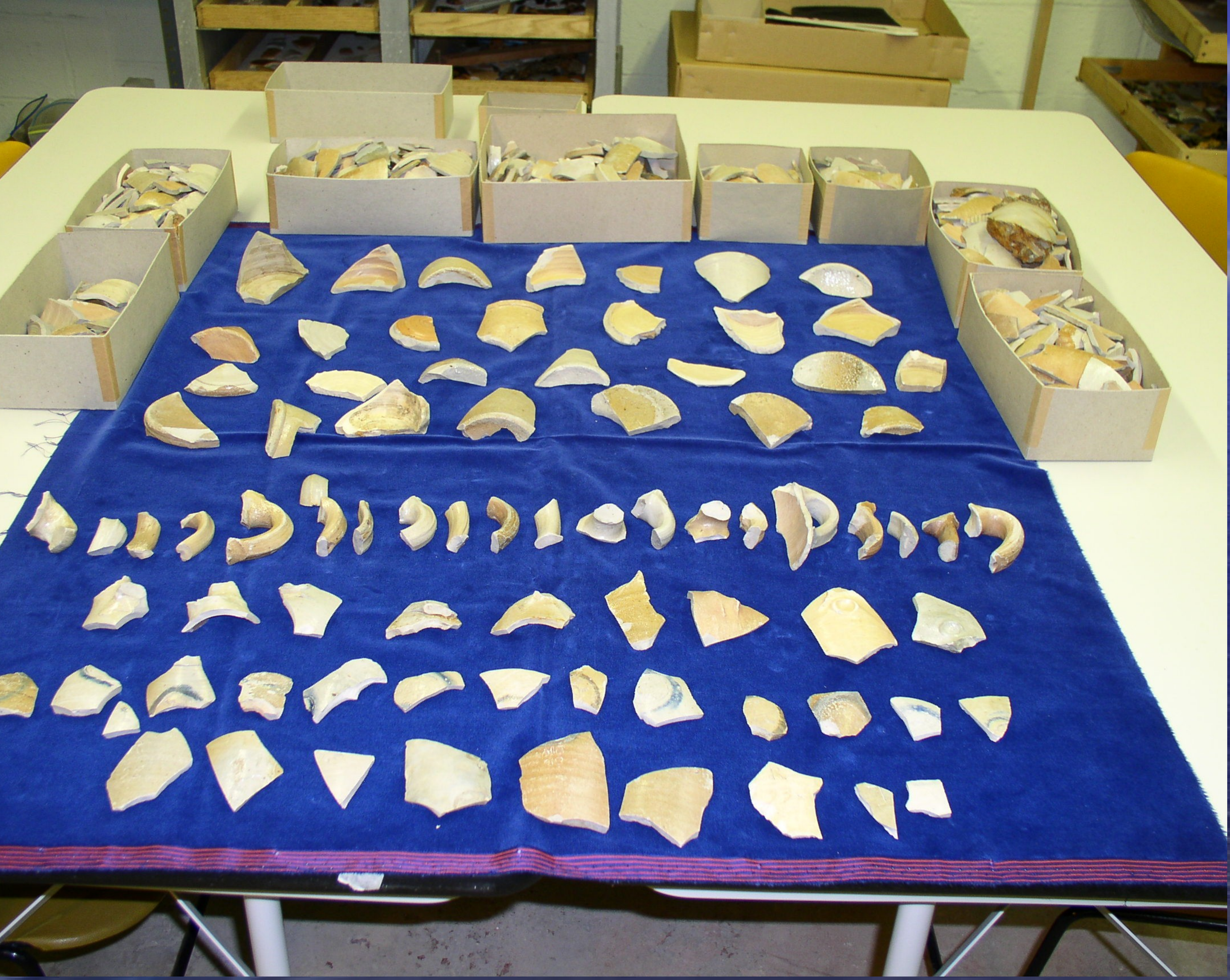
56 items found on 2/23/05

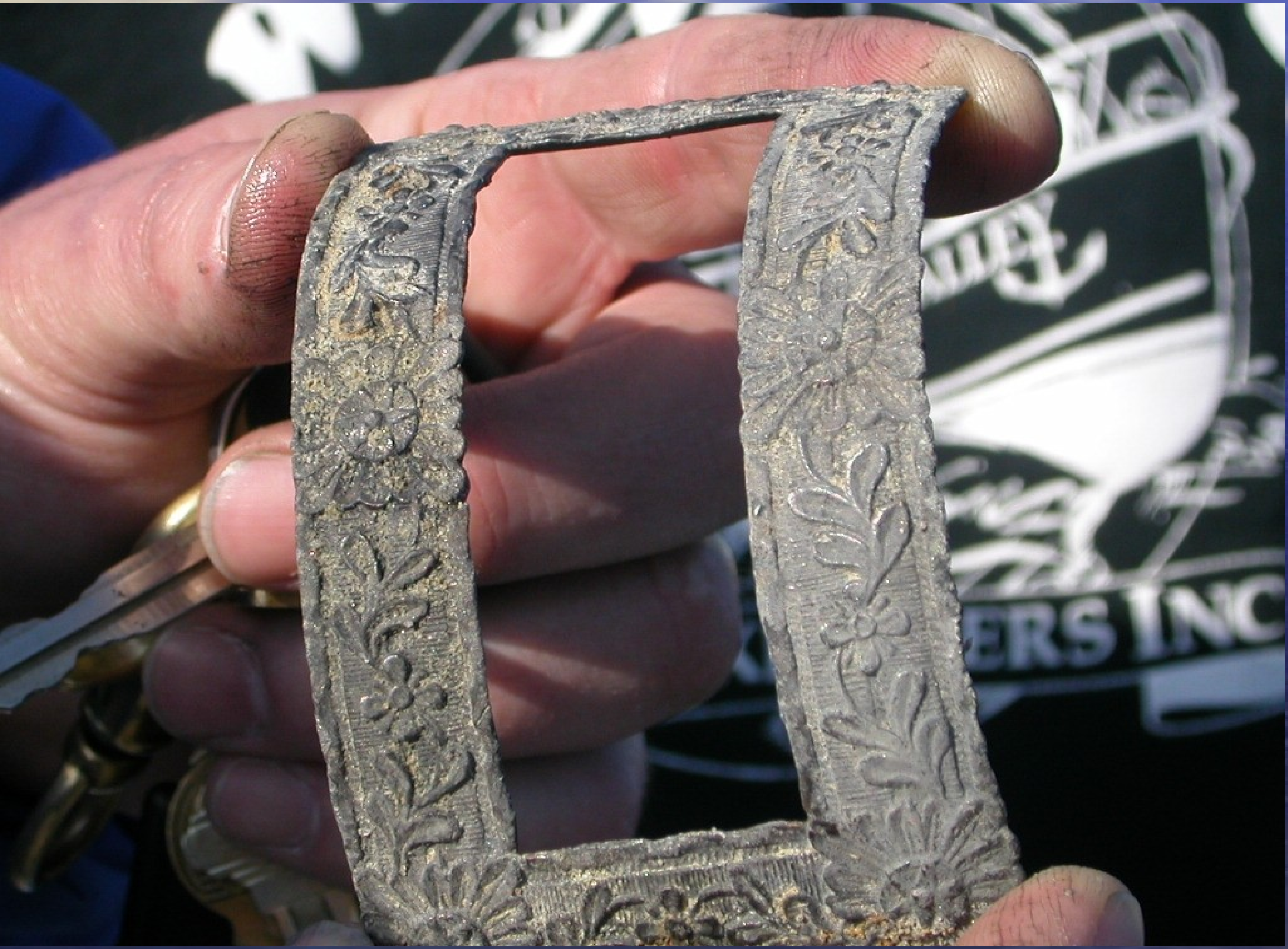


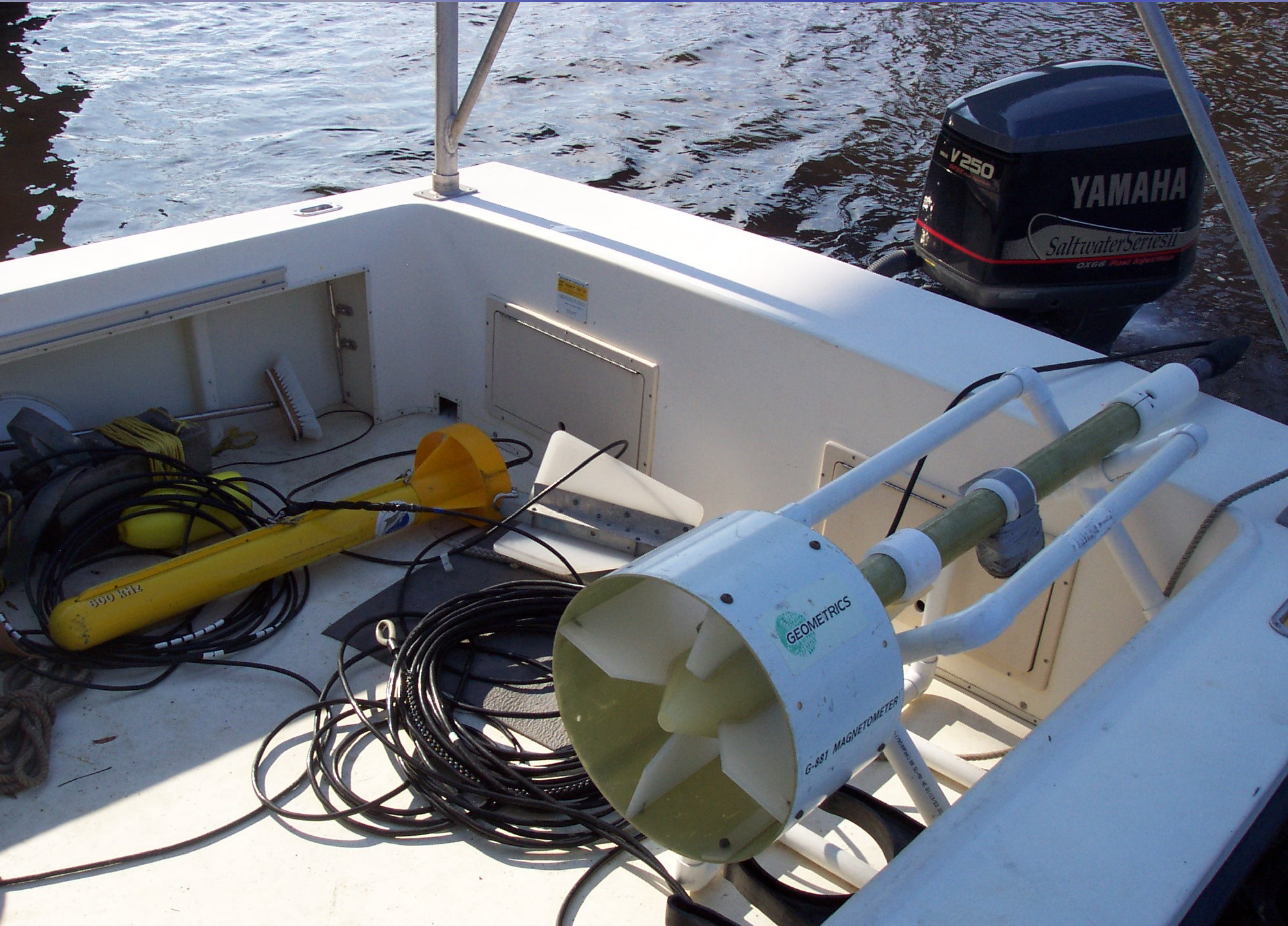
2/25/05

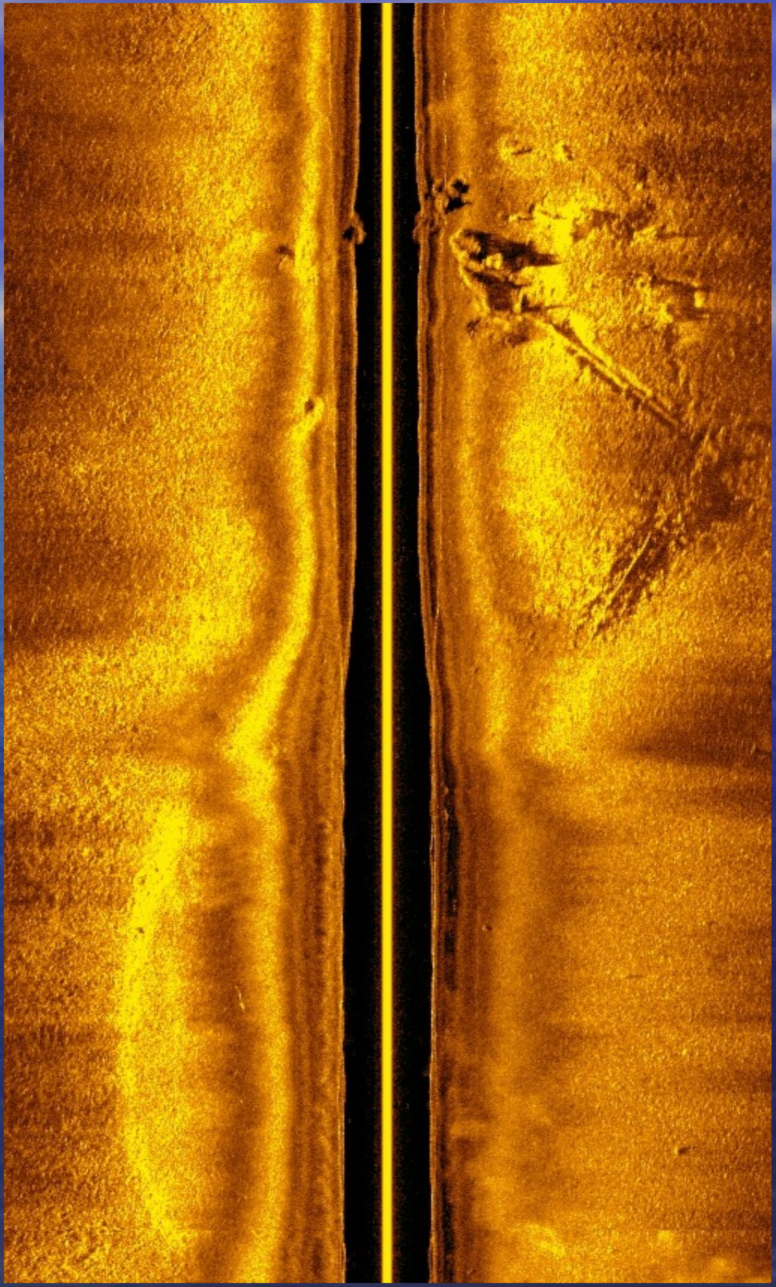
Area of large glass deposits, in and around the burm. 10 feet out at low tide is a deepening trench that seems to hold the larger items. Volunteers have seen the tide just start to move large pieces out and then pull them back in, just out of reach.


GEO. & JOANNE CAMPBELL
1/6/05
GEO. & JOANNE CAMPBELL
1/6/05
. & JOANNE
MPBELL
1/6/05
GEORGE & JOANNE CAMPBELL
1/6/05
JOANNE CAMPBELL
1/6/05
GEO. & JOANNE




ERS INC


V250
YAMAHA
SaltwaterSeriesII
600 kHz
GEOMETRICS
G-881 MAGNETOMETER



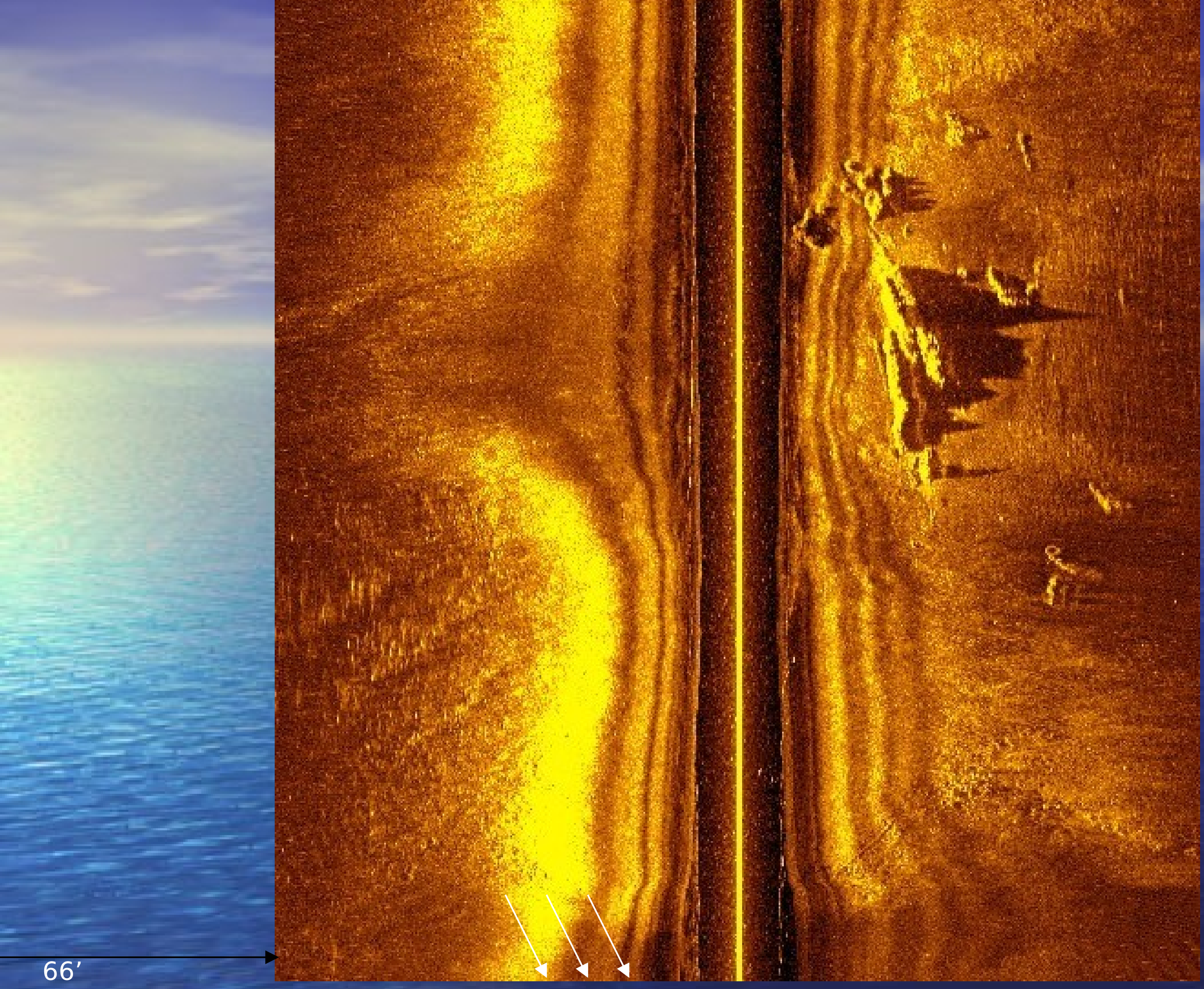
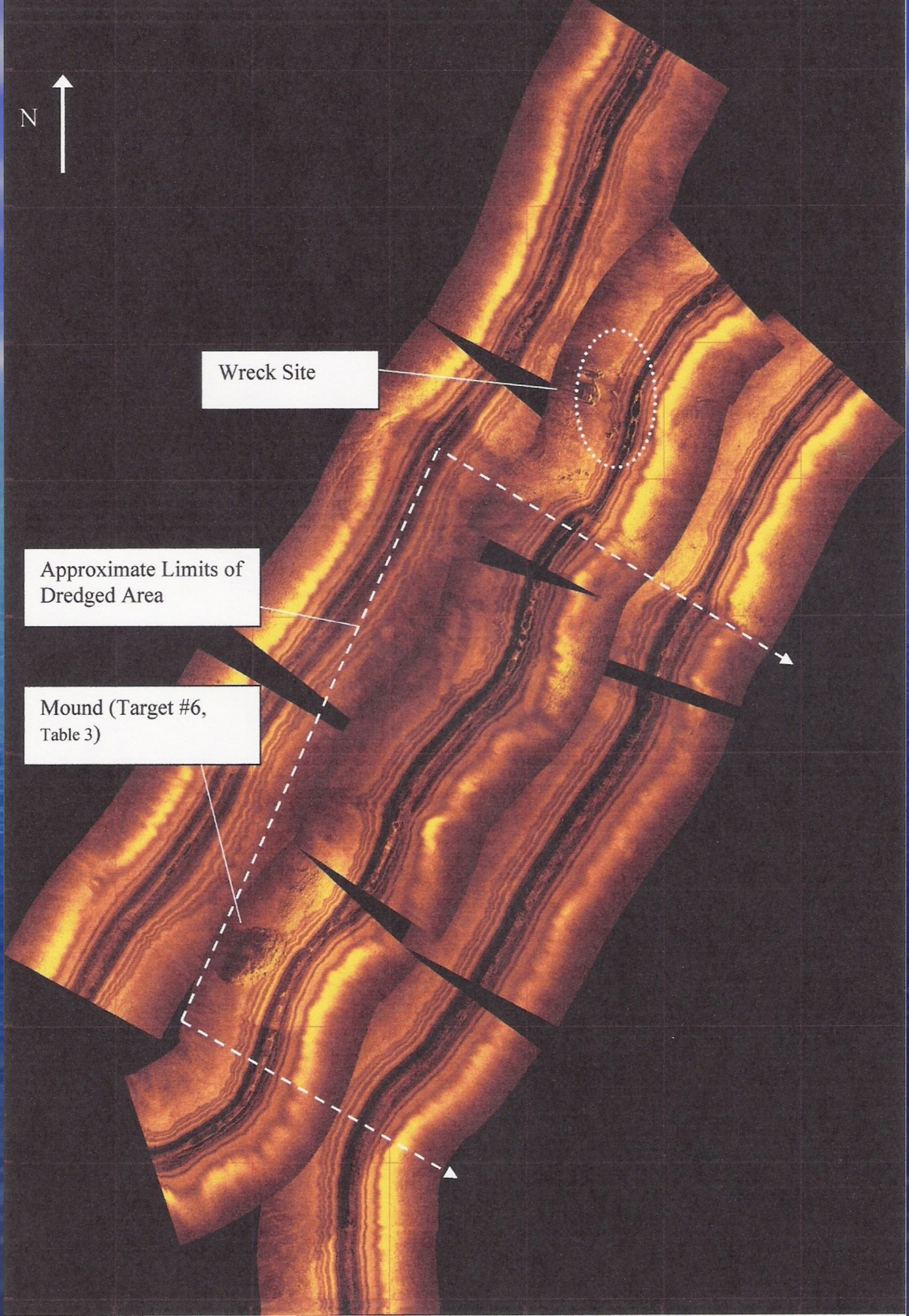
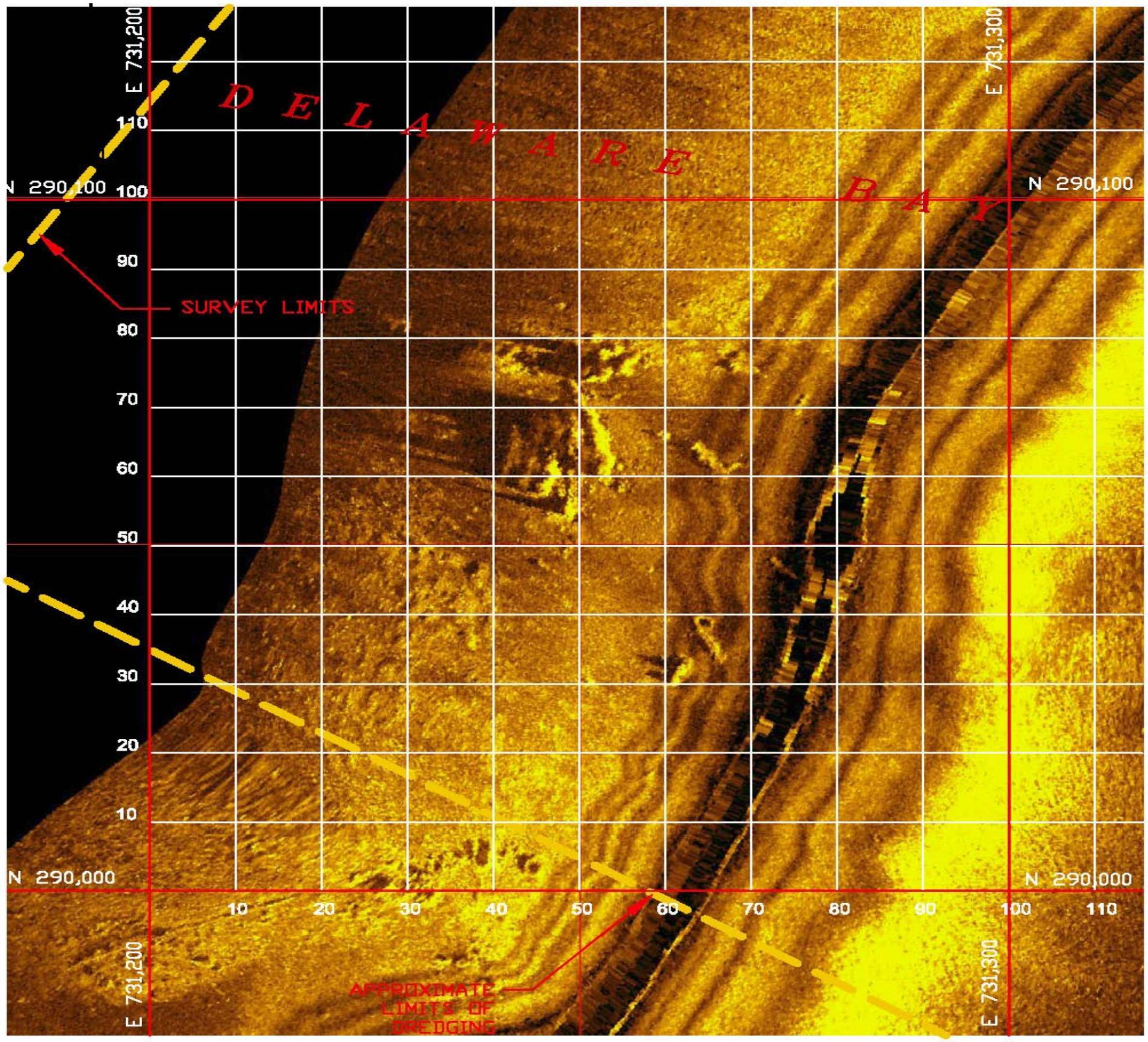


Figure 8. Raw Sonar Image of Wreck Site (7S-D-91A) (Source: file *27Feb639*)
Comments: Dredged Area is darker shade at bottom of image (white arrows).
Shadows behind the concretions at the wreck site indicate relief above the bottom surface
Scale: 66’ per channel **Sensor Frequency**: 1,200kHz


N
Wreck Site
Approximate Limits of Dredged Area
Mound (Target #6, Table 3)

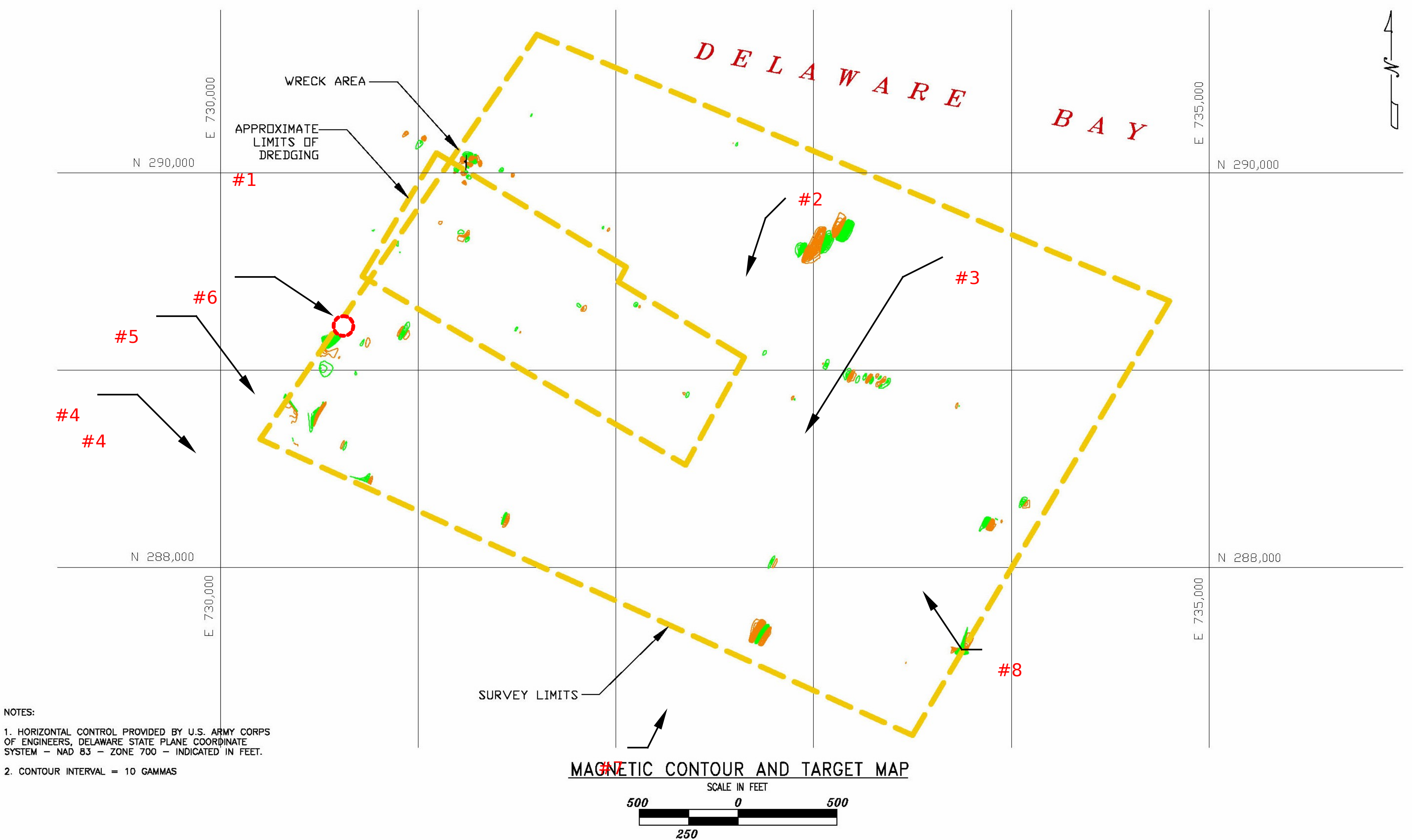

D E L A W A R E B A Y
E 731,200
E 731,300
N 290,100
N 290,000
110
100
90
80
70
60
50
40
30
20
10
10
20
30
40
50
60
70
80
90
100
110
SURVEY LIMITS
APPROXIMATE LIMITS OF DREDGING

SIDE SCAN SONAR IMAGE

SCALE IN FEET

20 0 20

10


D E L A W A R E
B A Y
N
WRECK AREA
APPROXIMATE LIMITS OF DREDGING
E 730,000
E 735,000
N 290,000
N 288,000
#1
#2
#3
#4
#4
#5
#6
#7
#8
SURVEY LIMITS
MAGNETIC CONTOUR AND TARGET MAP
SCALE IN FEET
500
0
500
250

NOTES:

1. HORIZONTAL CONTROL PROVIDED BY U.S. ARMY CORPS OF ENGINEERS, DELAWARE STATE PLANE COORDINATE SYSTEM – NAD 83 – ZONE 700 – INDICATED IN FEET.

2. CONTOUR INTERVAL = 10 GAMMAS

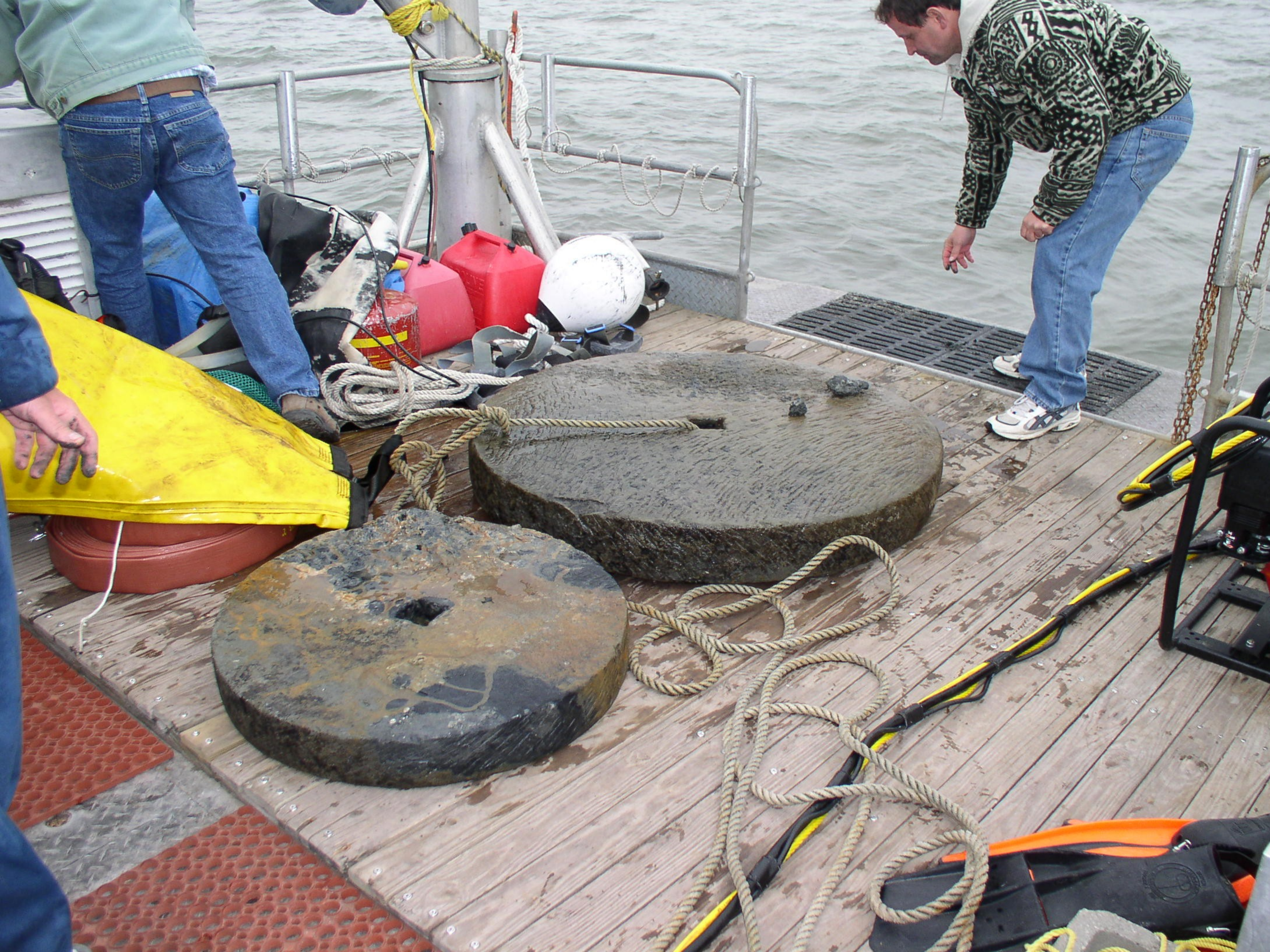
Figure 7. Magnetic Contour Map and Target Map: Borrow Area #2

Note**:** ○ = Sonar only target

VENTURE III
BELMAR, N.J.

12
11
10
9

NAVAL OCEANOGRAPHIC OFFICE
GUEST
CF 200



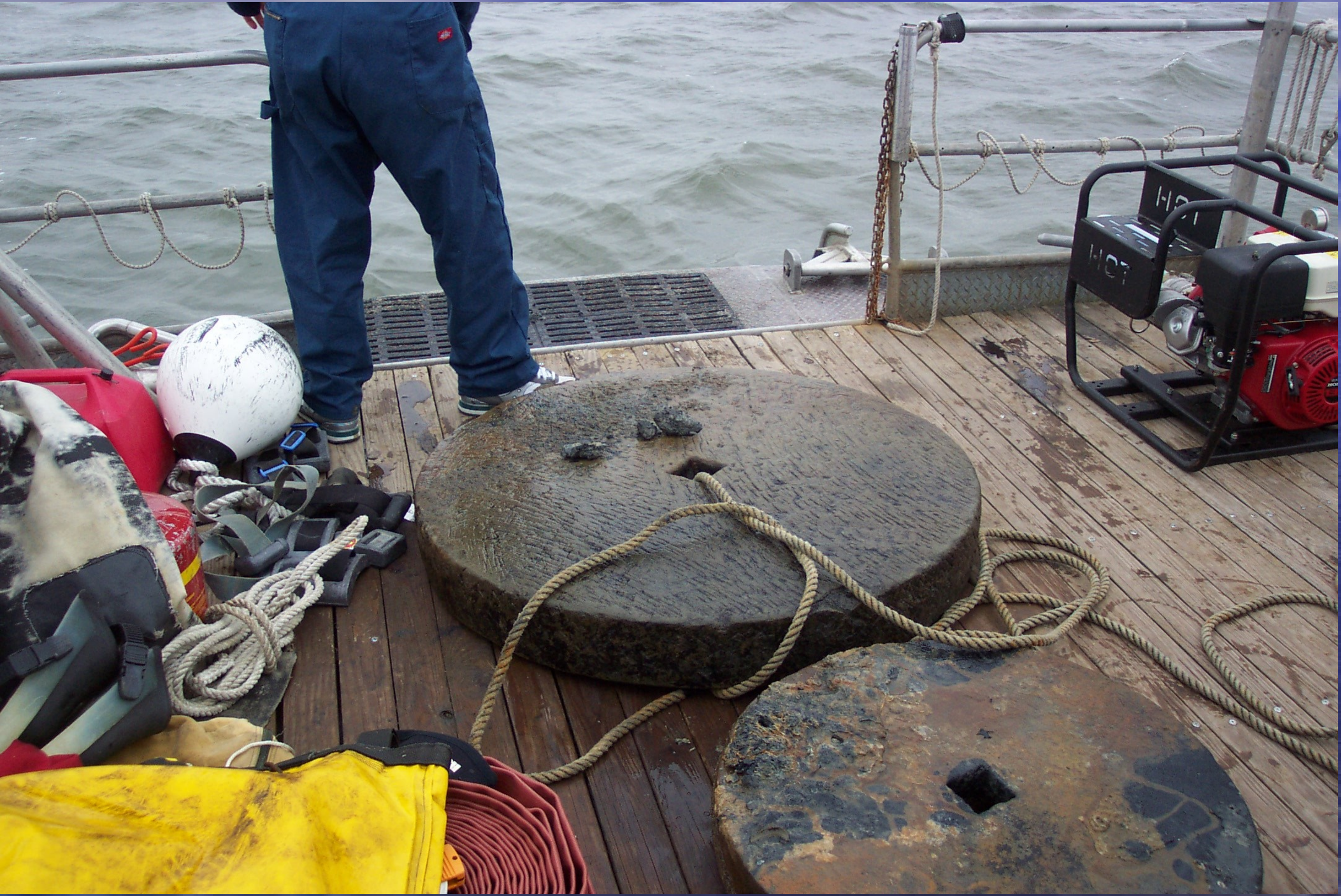
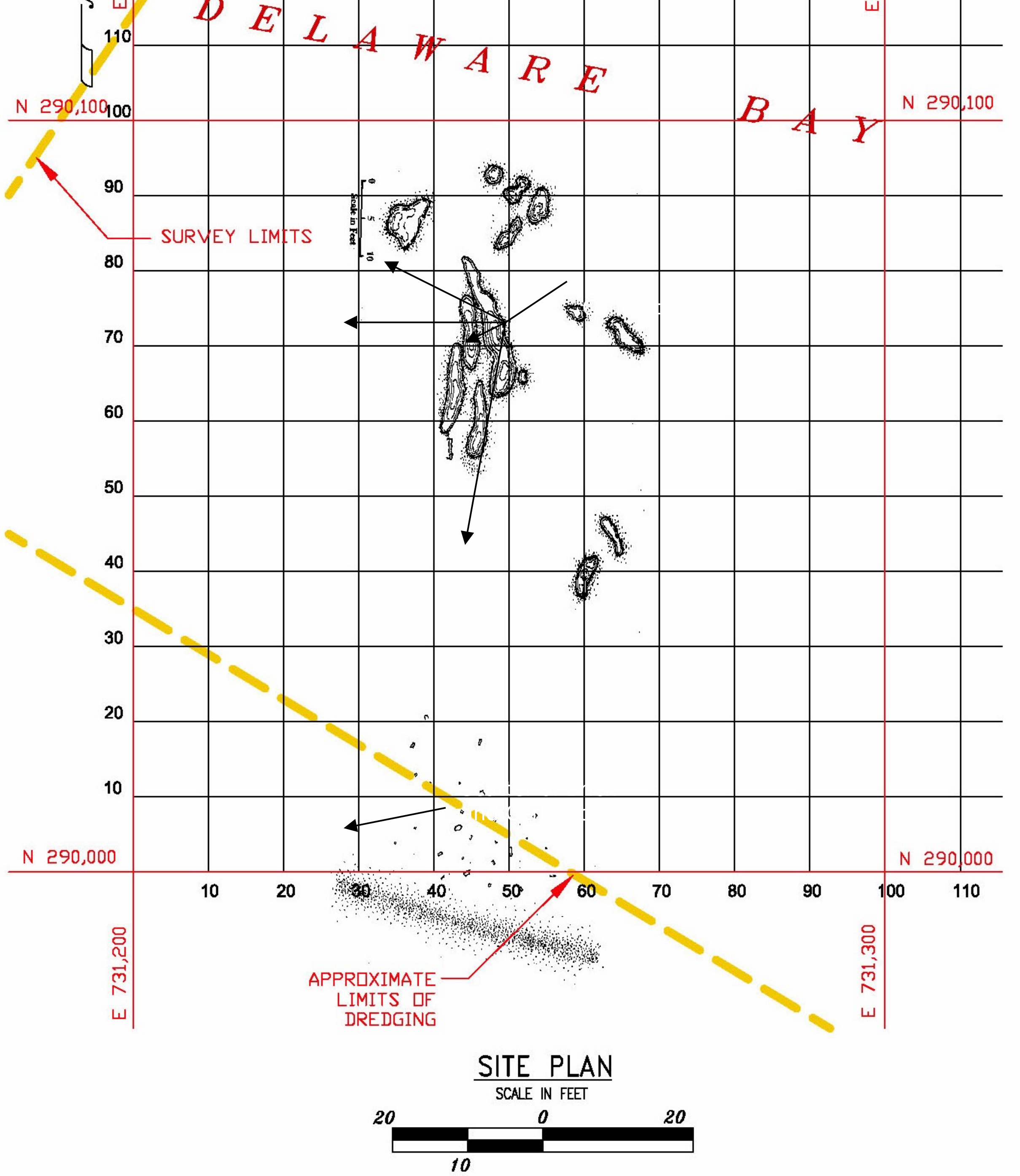


Plate 23. Two Millstones, large and small, on back deck of *Venture III* (*N50/E30*)
(Photographer: Lee Cox, 4/2005).


DELAWARE BAY
N 290,100
N 290,000
E 731,200
E 731,300
SURVEY LIMITS
APPROXIMATE LIMITS OF DREDGING
Scale in Feet
0
5
10
10
20
30
40
50
60
70
80
90
100
110
SITE PLAN
SCALE IN FEET
20
0
20
10

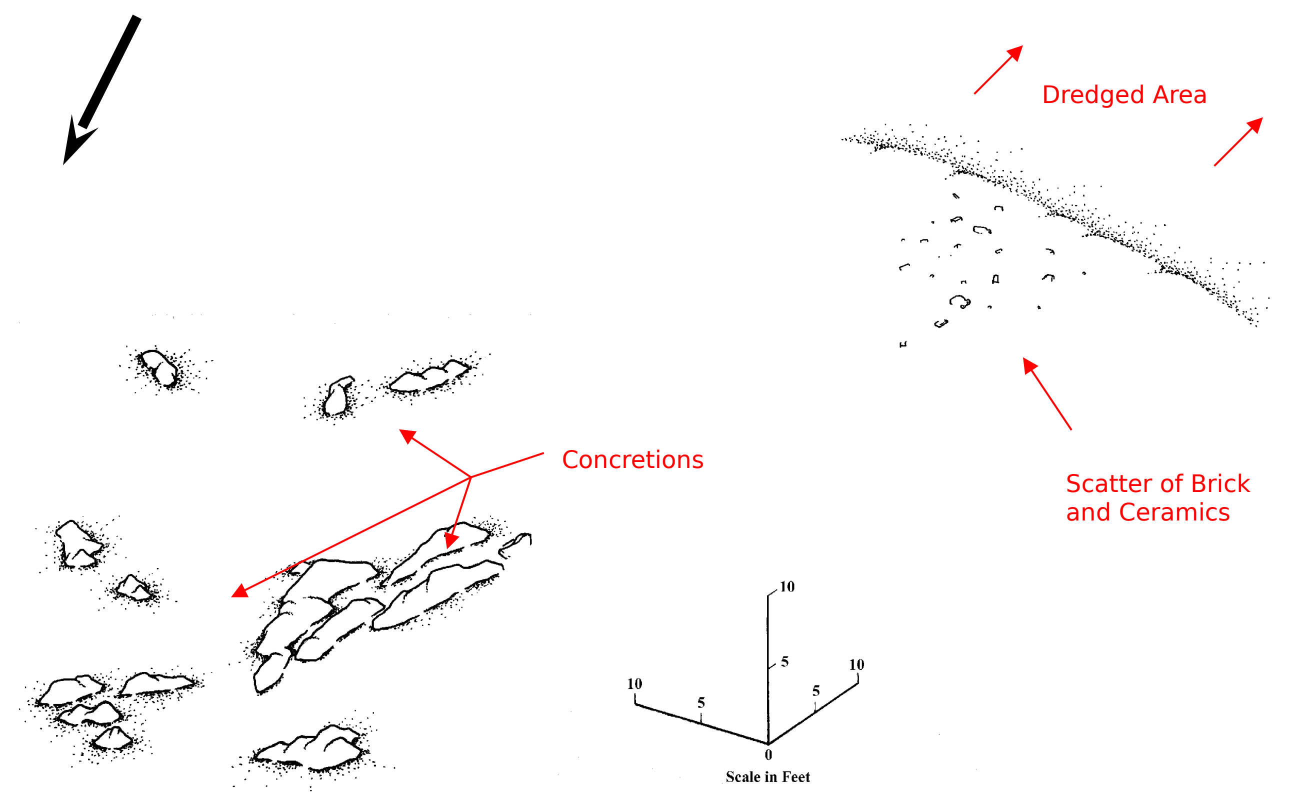
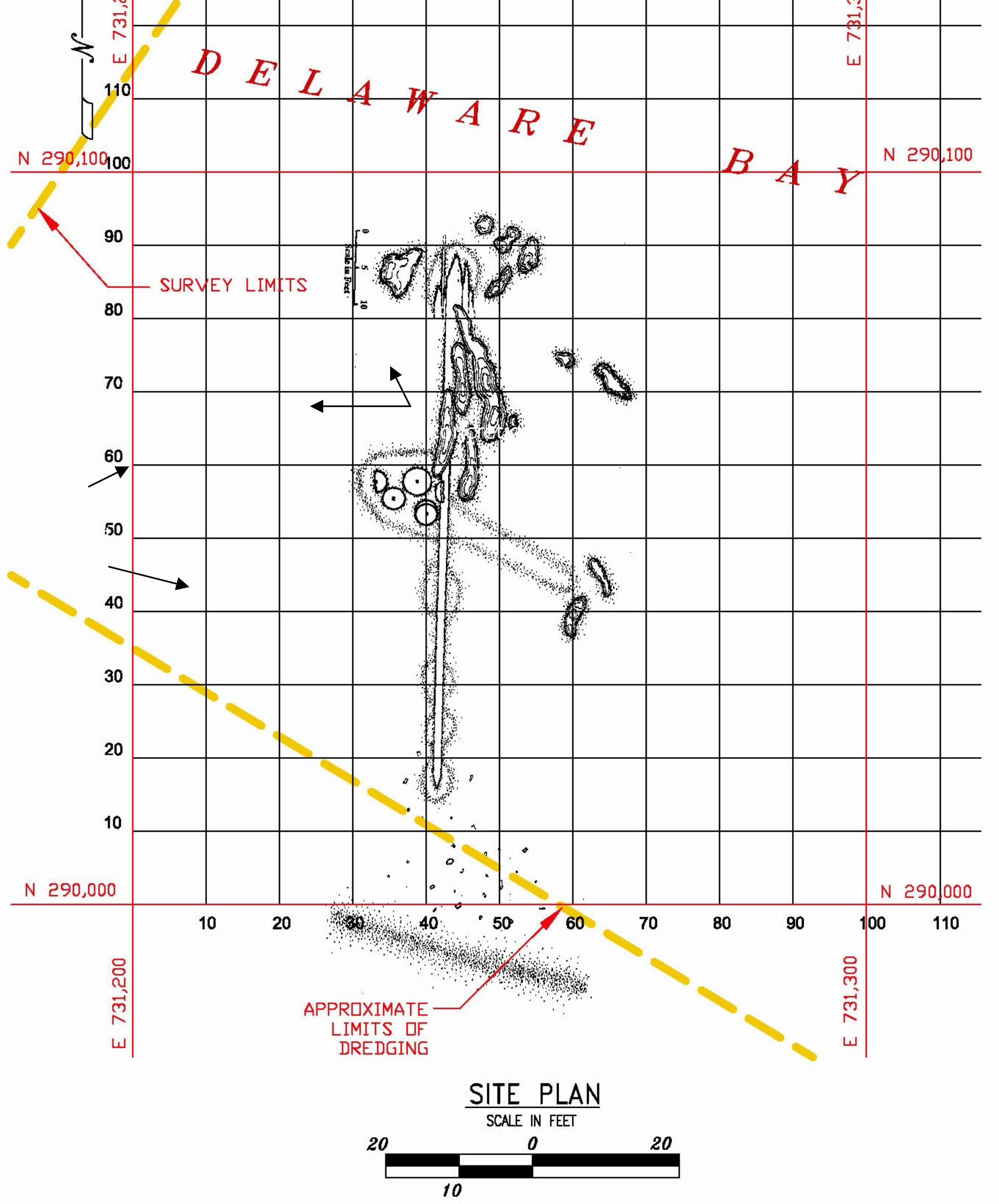

Dredged Area
Concretions
Scatter of Brick and Ceramics
10
5
10
5
10
5
0
Scale in Feet

Figure 11. Perspective View – Site Prior to Excavation

M


DELAWARE
BAY
N 290,100
N 290,100
SURVEY LIMITS
Scale in Feet
0
5
10
110
100
90
80
70
60
50
40
30
20
10
N 290,000
N 290,000
10
20
30
40
50
60
70
80
90
100
110
E 731,200
E 731,300
APPROXIMATE
LIMITS OF
DREDGING
SITE PLAN
SCALE IN FEET
20
0
20
10

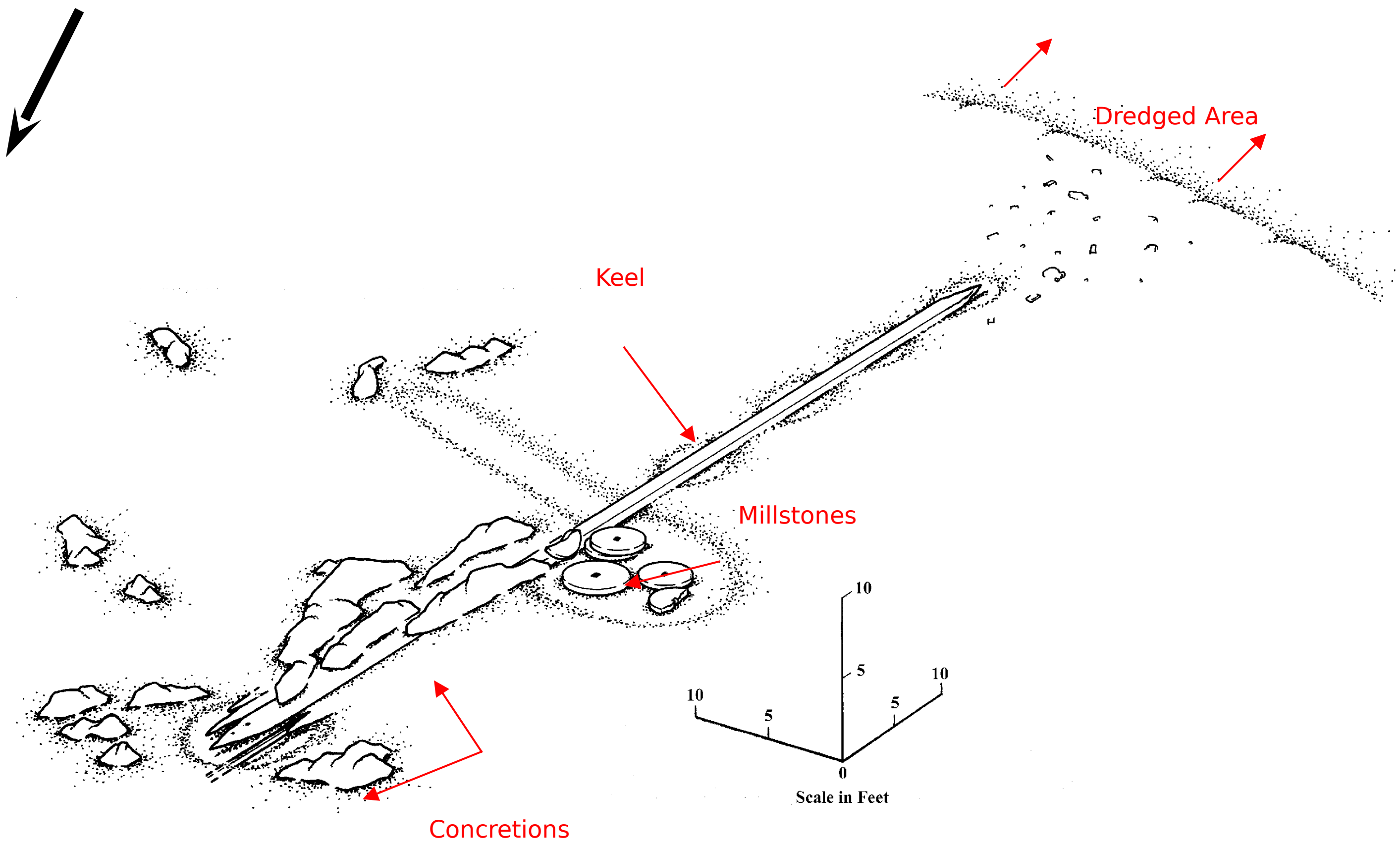
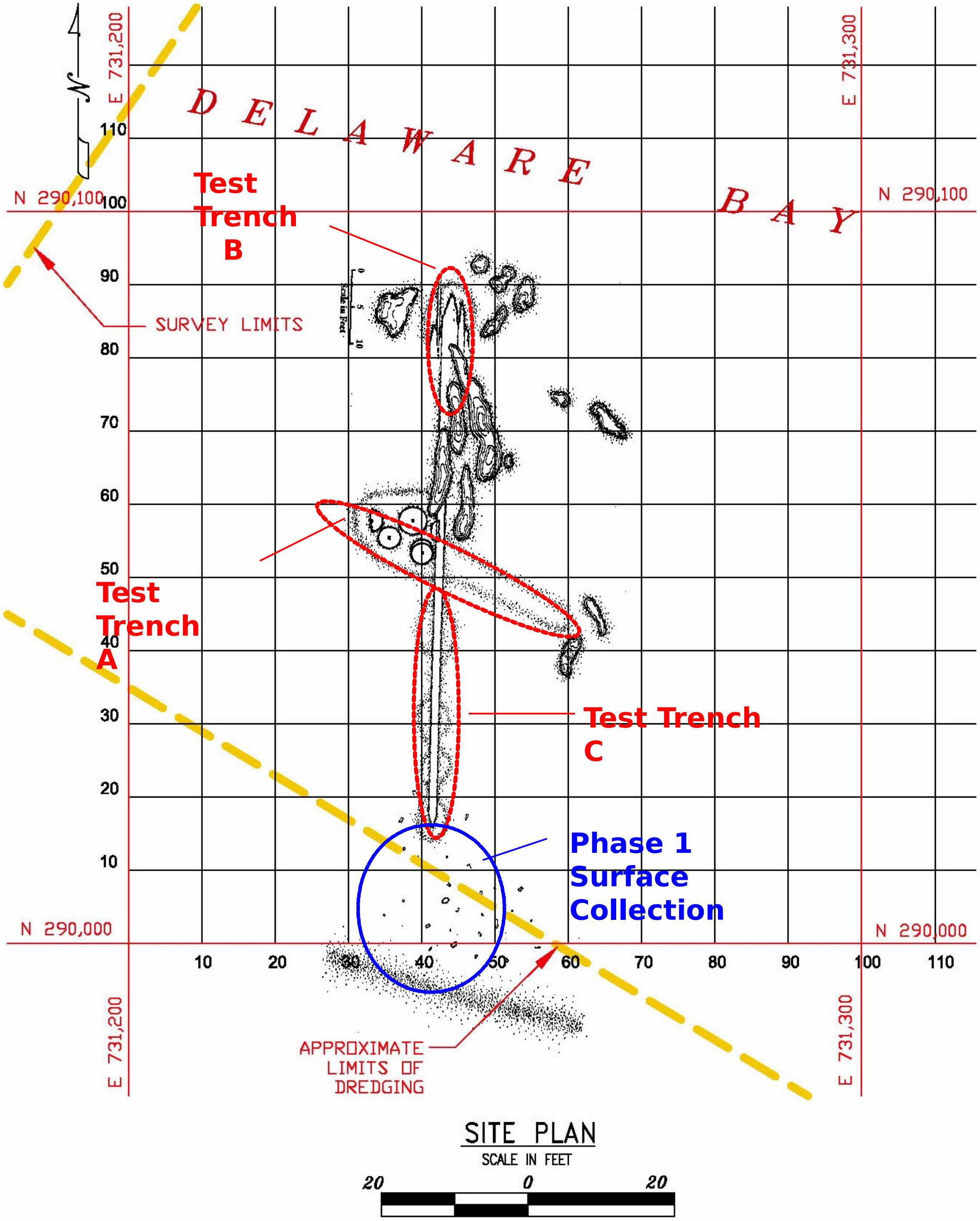
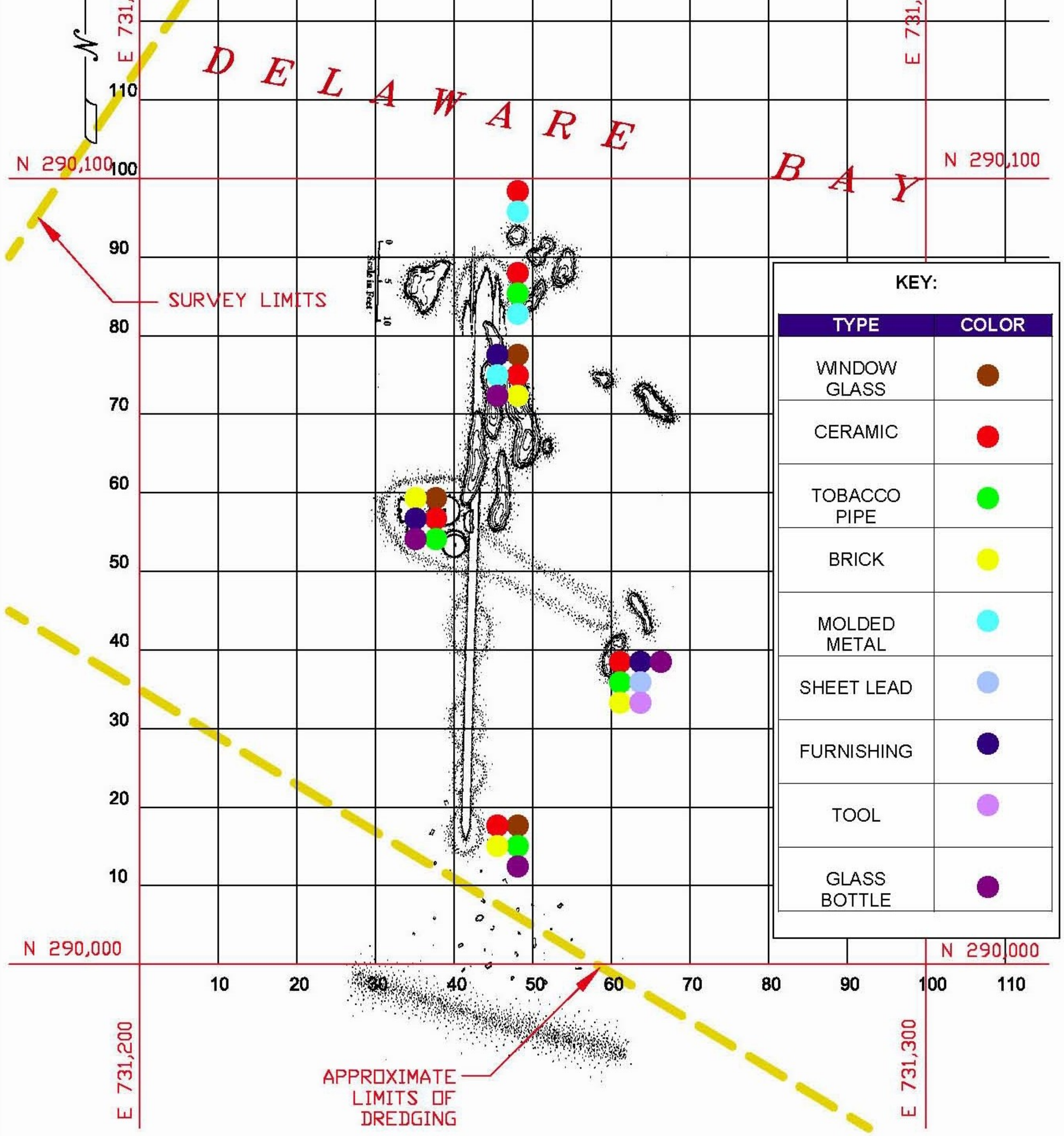

Dredged Area
Keel
Millstones
10
5
10
10
5
5
0
Scale in Feet
Concretions

Figure 19. Perspective View of Wreck Site (7S-D-91A) After Test Excavations


E 731,200
N
110
N 290,100
100
DELAWARE BAY
E 731,300
N 290,100
Test Trench B
90
SURVEY LIMITS
80
0 5 10
Scale in Feet
70
60
50
Test Trench A
40
30
Test Trench C
20
10
Phase 1 Surface Collection
N 290,000
N 290,000
10
20
30
40
50
60
70
80
90
100
110
E 731,200
E 731,300
APPROXIMATE LIMITS OF DREDGING
20
0
20
10

SITE PLAN

SCALE IN FEET


N
E 731,
DELAWARE BAY
N 290,100
N 290,100
SURVEY LIMITS
Scale in Feet
0
5
10
N 290,000
N 290,000
110
100
90
80
70
60
50
40
30
20
10
10
20
30
40
50
60
70
80
90
100
110
E 731,200
E 731,300
APPROXIMATE LIMITS OF DREDGING

KEY:

TYPE	COLOR
WINDOW GLASS	●
CERAMIC	●
TOBACCO PIPE	●
BRICK	●
MOLDED METAL	●
SHEET LEAD	●
FURNISHING	●
TOOL	●
GLASS BOTTLE	●

SITE PLAN

SCALE IN FEET

20 0 20

Plate 7. Typical Concretion at Wreck Site (Photographer: Wes Hall, 4/2005).

Plate 6. Underwater View of Salt Glazed Stoneware Bottle/Jug (Photographer: Wes Hall, 4/2005).

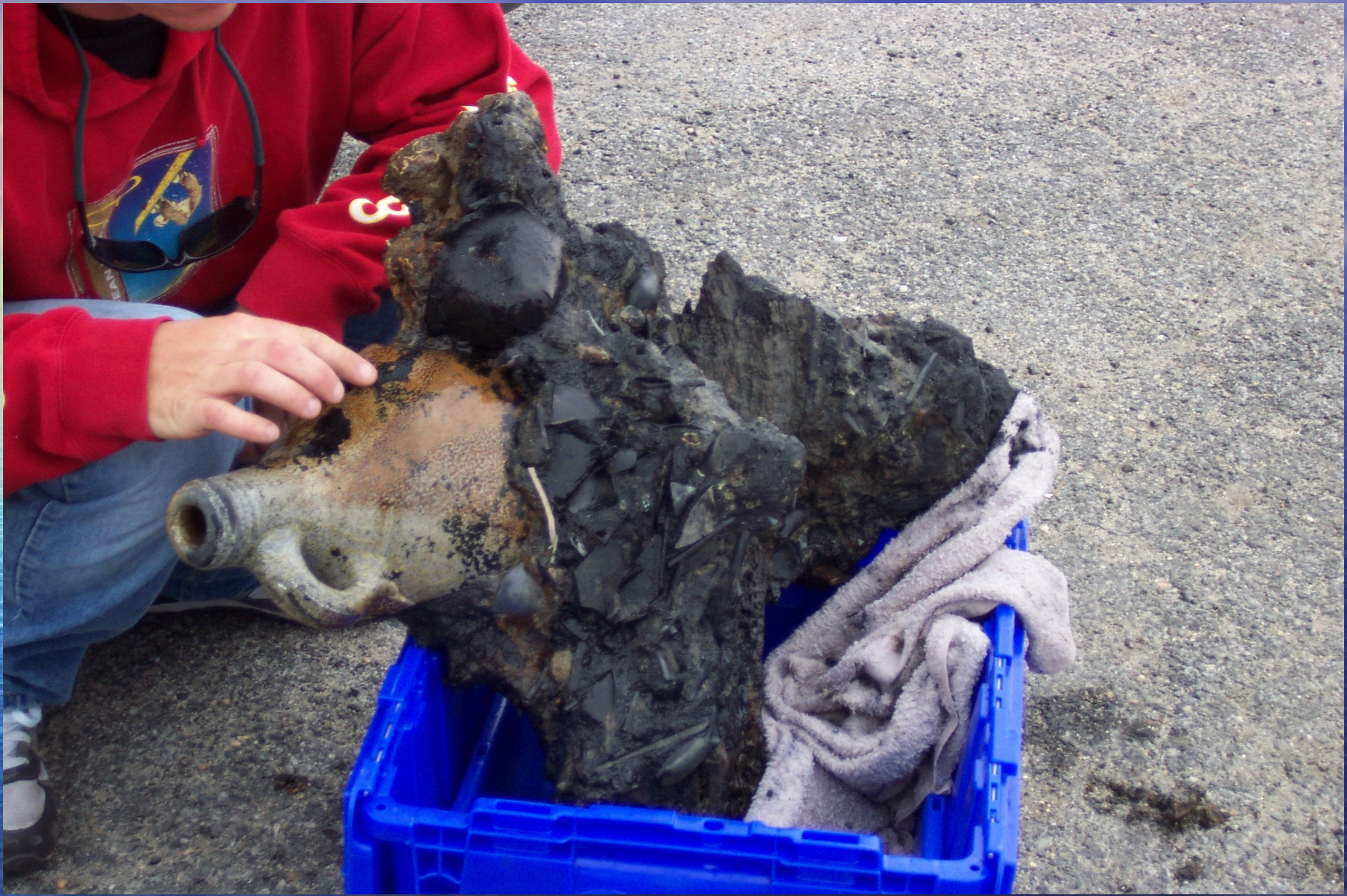


Plate 10. Concretion with large stoneware bottle/jug, with other ceramics, glass and numerous Dutc
fragments and pipestems **(*N80/E40*)**
(Photographer: Lee Cox, 4/2005).

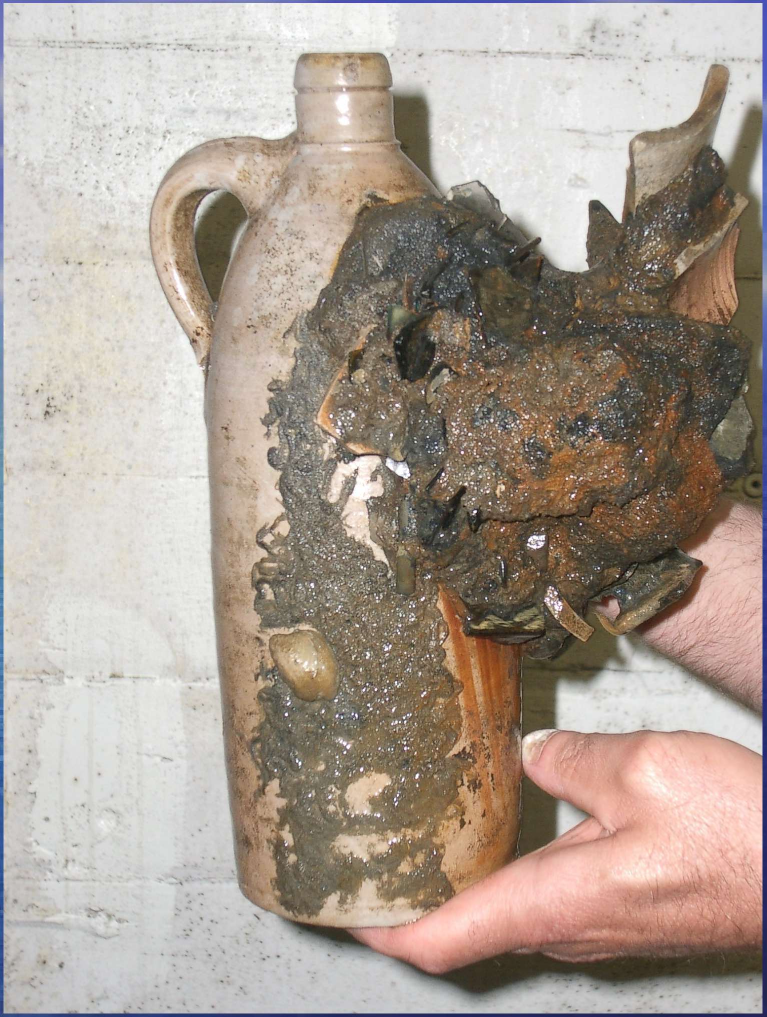
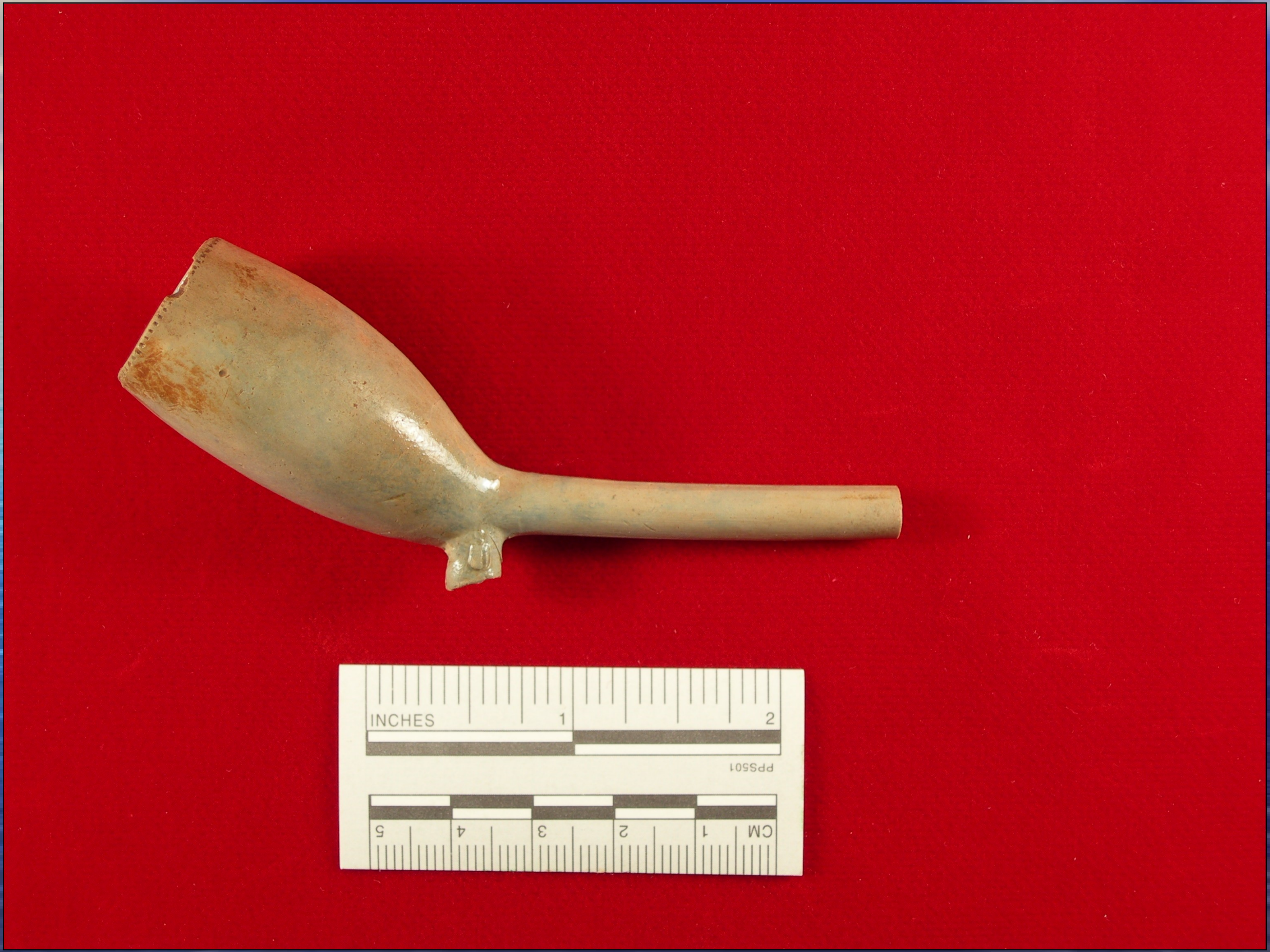
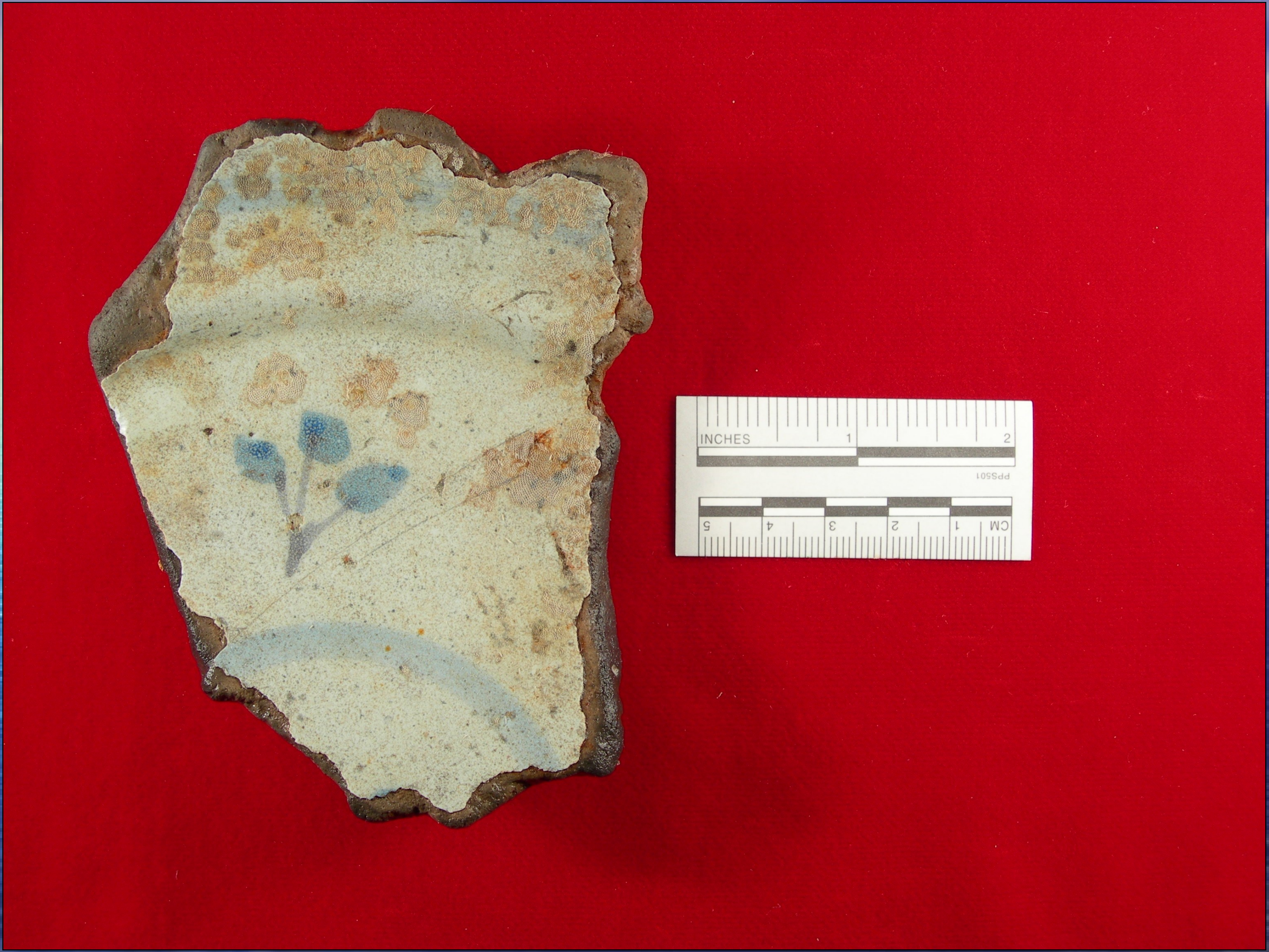


Plate 11. Concretion with Mineral Water Bottle, complete, with attached ceramics and glass

(***N30/E60***) (Photographer: Charles Fithian, 6/2005)


INCHES 1 2
PPS501
CM 1 2 3 4 5


INCHES
1
2
PPS501
CM
1
2
3
4
5

DELL

Major Findings

- 23,000 artifacts (1762 – 1775)
- British Merchant Ship (@250 ton displacement based on 90’ keel)
- Eligible for National Register of Historic Places (Criteria A & D)
- HMS Severn Lost 1774 Near Lewes, DE
- State Funded Data Recovery Planned

Key Takeaway Points

- Ground truth suspicious sonar images
- Focus on the resource, not agency image
- Work with, not against, SHPO
- Involve the interested public
- Utilize Intra-Corps talent and resources
- Partner with state and local agencies